RÉPUBLIQUE FRANÇAISE
NOUVELLE-CALÉDONIE
ET DÉPENDANCES

DIRECTION
POUR LE DÉVELOPPEMENT
DE L'ÉCONOMIE RURALE

SERVICE DE LA RECHERCHE
DE LA FORMATION
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CENTRE DE RECHERCHE ET
D'EXPÉRIMENTATION AGRONOMIQUES
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INSTITUT FRANÇAIS
DE RECHERCHE SCIENTIFIQUE
POUR LE DÉVELOPPEMENT
EN COOPÉRATION
(ORSTOM)

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INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFÉRENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNÉSIEN

ANNEXE 84-3

ANALYSES STATISTIQUES EFFECTUEES SUR
LES DONNEES DE BASE ET DERIVEES OBSERVEES
SUR LE PREMIER CYCLE CULTURAL

Deuxième convention Territoire-ORSTOM
pour l'étude des effets des amendements calciques
sur les sols cultivables de Nouvelle-Calédonie

République Française
Nouvelle-Calédonie
et Dépendances.

Direction pour le Développement
de l'Economie Rurale
Service de la Recherche
de la Formation et de la Diffusion
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Deuxième Convention Territoire - ORSTOM pour l'étude des effets des amendements calciques sur les sols cultivables de Nouvelle-Calédonie.

SOMMAIRE.

1 - PARAMETRES OBSERVES. 3
1.1. Paramètres "plante" 4
1.2. Paramètres "sol" 8

2 - RECAPITULATIF DES ANALYSES DE VARIANCE 12
2.1. Paramètres "plante" 13
2.2. Paramètres "sol" 84 A 17
2.3. Paramètres "sol" 84 B 22

3 - ANALYSES DE VARIANCE 24
3.1. Paramètres "plante" 25
3.2. Paramètres "sol" 84 A 136
3.3. Paramètres "sol" 84 B 255

4 - CORRELATIONS RESIDUELLES 266

5 - NORMALITES DES RESIDUS D'AJUSTEMENT DANS LE CAS DE L'ANALYSE DE VARIANCE EN CARRE LATIN 293

1 - PARAMETRES OBSERVES.

1.1. Paramètres "plante".

1.1.1. Paramètres "plante".

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
DL	nbre/m²	Densité de peuplement à la levée	
DR	"	Densité de peuplement à la récolte	
DE	"	Densité d'épis	
Hi	cm	Hauteur au ième jour	
Hi'	cm	Hauteur au i' ème jour	
Vi-1'	cm/j	Vitesse de croissance entre le ième et le i'ème jour	
NEPR	-	Nombre d'épis par plant de référence	
PRR	g/plant	Poids de rachis sec par plant de référence	
PGR	g/plant	Poids de grains secs " "	mesure directe
PRER	g/épi	Poids de rachis sec par épi "	PRER = PRR/NEPR
PGER	g/épi	Poids de grains secs par épi "	PGER = PGR/NEPR
TGE	%	Taux de grains secs par épi	TGE = 100.PGR/(PGR+PRR)
QGR	g/m²	Rendement estimé sur les pieds de référence	QGR = PGR.DR
N-GR	%	Teneur en azote des grains des pieds de référence	
P-GR	%	" phosphore "	
K-GR	%	" potassium "	
MG-GR	%	" magnésium "	
TCE-GR	%	Taux de cendres "	
PGUR	g/plant	Poids de grains secs par pied utile restant	Mesure directe
PG	g/plant	Poids moyen de grains secs par plant	PG = QG/DR
QG	g/m²	Rendement moyen	mesure directe

1.1.2. Paramètres "plante".

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
QN-GR	g/m^2	Exportation d'azote par les grains	Pour un élément E : QE-GR = QGxE-GR/100
QP-GR	"	" de phosphore "	
QK-GR	"	" de potassium "	
QMG-GR	"	" de magnésium "	
PTFR	g/plt	Poids de tiges et feuilles sèches par plant de référence	
NTF	%	Teneur en azote des tiges et feuilles	
PTF	"	" phosphore "	
KTF	"	" potassium "	
CATF	"	" calcium "	
MGTF	"	" magnésium "	
NATF	"	" sodium "	
MG/CAtf	"	Rapport Magnésium/Calcium "	
QTFR	g/m^2	Résidus aériens de récolte (tiges et feuilles)	QTFR = PTFR x DR
QNTF	"	Immobilisation en azote dans les tiges et feuilles	Pour un élément E : QETF = QTFR.ETF/100
QPTF	"	" phosphore "	
QKTF	"	" potassium "	
QCATF	"	" calcium "	
QMGTF	"	" magnésium "	

1.1.3. Paramètres "plante".

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
QTN	g/m^2	Immobilisation totale en azote dans les parties aériennes	Pour un élément E : QTE = QE.GR+QETF
QTP	"	" phosphore "	
QTK	"	" potassium "	
QTMG	"	" magnésium "	

1.2. Paramètres "sol".

1.2.1. Paramètres "sol" observés au début du premier cycle.

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
Ah	%	Teneur en argile dans l'horizon h	h=1 noté 0-20
LFh	%	" limon fin "	"
LGh	%	" limon grossier "	"
SFh	%	" sable fin "	"
SGh	%	" sable grossier "	"
HCCh	%	Humidité à pF 2.5	"
HPFPh	%	Humidité à pF 4.2	"
RUh	%	Réserve en eau utile	RUh = HCCh-HPFPh(h=1 note 0-20)
Ch	°/o	Teneur en carbone	h = 1 note 0-20
Nh	°/oo	" azote	"
C/Nh	-	Rapport C/N	"
MOh	"	Teneur en matière organique	"
PAOh	ppm	Teneur en phosphore assimilable OLSEN	h = 1 abscent
PTh	ppm	" total	"
Kh	meq/100g	Teneur en potassium échangeable	h = 1 noté 0-20
NAh	"	" sodium "	"
CAh	"	" calcium "	"
MGh	"	" magnésium "	"
SBEh	"	Somme des bases échangeables	h = 1 abscent, SBE2 noté S2
Th	"	Capacité d'échange en cations	h = 1 noté 0-20
S/Th	%	Taux de saturation	"

1.2.2. Paramètres "sol" observés au début du premier cycle.

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
CA/MGh	-	Rapport calcium / magnésium échangeables	h = 1 noté 0-20
RAPh	-	Rapport (CA+MG)/K échangeables	"
PH-H_2Oh	-	pH eau	h = 1 absent ; PH-H_2O2 noté PHE2
PH-KCLh	-	pH KCl	" ; PH-KCl2 noté PHK2
KT hA	meq/100g	Teneur en potassium total	
NAT h A	"	" sodium "	
CAT h A	"	" calcium "	
MGT h A	"	" magnésium "	

1.2.3. Paramètres "sol" observés à la fin du premier cycle.

PARAMETRES (sigles)	UNITES	DEFINITIONS	OBSERVATIONS - FORMULES.
C1 B	%	Teneur en carbone dans l'horizon 1	
N1 B	°/oo	" azote "	
C/N 1 B	-	Rapport carbone / azote "	
PHE 1 B	-	pH eau dans l'horizon 1	
PH KCl 1B	-	pH KCl dans l'horizon 1	

2 - RECAPITULATIF DES ANALYSES DE VARIANCE

2.1. Récapitulatif des analyses de variance des paramètres "plante".
(pour les sigles, cf l'annexe 1.1.).

T.2.1.1. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE ..1...
PREMIER CYCLE (1984) - CARACTERISTIQUES "PLANTE".

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
DL	nbr/m²	1,9	1,98	14,65	0,288	14,64	14,66	0,882	14,61	14,75	14,59	0,814	14,51	14,79	14,62	14,71	14,71	14,57
DR	nbr/m²	3,9	0,23	6,25	0,773	6,29	6,22	0,065	6,26	6,24	6,26	0,122	6,32	6,27	6,28	6,21	6,21	6,24
DE	"	10,8	3,12	5,67	0,117	5,68	5,66	0,428	5,72	5,53	5,75	0,618	5,74	5,41	5,88	5,70	5,65	5,62
H 38	cm	7,9	3,51	13,7	0,952	13,5	14,0	1,000	14,6	13,7	13,0	0,767	14,0	13,5	12,9	15,2	13,8	13,1
H 45	"	8,2	6,46	21,5	0,990	20,9	22,1	1,000	23,1	21,4	20,1	0,378	22,3	20,7	19,8	23,9	22,1	20,4
H 52	"	10,4	3,19	41,3	0,960	40,2	42,4	1,000	45,0	41,3	37,7	0,191	44,2	39,7	36,8	45,9	42,8	38,6
H 59	"	10,5	7,64	66,5	0,941	64,9	68,1	1,000	72,4	66,2	60,8	0,055	70,8	64,3	59,5	74,1	68,2	62,1
H 66	"	7,1	4,38	107,4	0,987	104,9	110,0	1,000	115,1	107,3	99,8	0,254	112,5	105,5	96,7	117,7	109,2	102,8
H 72	"	9,7	4,57	156,6	0,946	153,0	160,0	1,000	165,3	157,2	147,3	0,071	162,9	153,7	142,5	167,6	160,7	152,2
V38-45	cm/j	16,9	3,70	1,109	0,954	1,062	1,155	0,995	1,210	1,105	1,011	0,323	1,180	1,030	0,977	1,241	1,179	1,045
V45-52	"	13,8	7,65	2,832	0,868	2,760	2,904	1,000	3,136	2,840	2,520	0,444	3,132	2,712	2,436	3,140	2,967	2,604
V52-59	"	14,4	4,43	3,594	0,779	3,517	3,670	0,998	3,913	3,565	3,303	0,110	3,795	3,508	3,248	4,031	3,622	3,358
V59-66	"	10,6	3,08	5,845	0,894	5,723	5,967	0,980	6,100	5,874	5,562	0,637	5,967	5,888	5,315	6,232	5,861	5,810
V66-72	"	7,7	2,98	8,196	0,976	8,017	8,375	0,951	8,356	8,308	7,924	0,865	8,396	8,035	7,619	8,316	8,581	8,230
NEPR	nbr/plt	3,6	1,71	0,980	0,005	0,980	0,980	0,995	0,958	0,988	0,993	0,896	0,958	1,000	0,981	0,958	0,977	1,005
PRR	g/plt	8,3	4,41	21,0	0,061	20,9	21,0	0,961	20,4	21,7	20,8	0,823	20,2	22,2	20,4	20,5	21,2	21,3
PGR	"	11,3	1,45	113,1	0,787	111,2	115,1	1,000	101,8	117,8	119,8	0,014	99,6	116,1	118,0	104,1	119,4	121,6
PRER	g/épi	7,4	0,64	21,4	0,129	21,4	21,4	0,883	21,2	21,9	21,0	0,462	21,1	22,2	20,8	21,3	21,7	21,2
PGER	g/épi	10,1	1,50	115,3	0,844	113,3	117,3	1,000	106,0	119,1	120,7	0,257	103,6	116,0	120,2	108,5	122,2	121,3
TGE	%	1,5	1,93	84,3	0,813	84,1	84,5	1,000	83,2	84,4	85,2	0,704	83,0	83,9	85,3	83,4	84,9	85,1
QGR	g/m²	12,0	1,95	707,1	0,418	698,7	715,4	1,000	637,5	734,6	749,1	0,003	628,8	727,4	740,0	646,2	741,8	758,2
N-GR	%	4,3	7,17	1,61	0,471	1,62	1,61	0,999	1,65	1,62	1,57	0,763	1,66	1,64	1,55	1,64	1,60	1,58
P-GR	%	4,9	5,53	0,309	0,350	0,308	0,309	0,830	0,310	0,312	0,304	0,660	0,311	0,313	0,299	0,310	0,310	0,308

T.2.1.2. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE ..1...
PREMIER CYCLE (1984) - CARACTERISTIQUES "PLANTE".

PARAMETRES		CV%	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
K-GR	%	5,4	5,87	0,434	0,202	0,435	0,435	0,979	0,445	0,430	0,426	0,804	0,449	0,432	0,418	0,442	0,428	0,434
MG-GR	%	6,3	2,55	0,140	0,706	0,141	0,139	0,892	0,142	0,140	0,137	0,119	0,143	0,141	0,138	0,141	0,140	0,135
TCE-GR	%	18,2	5,22	1,916	0,023	1,914	1,917	0,944	1,910	1,791	2,046	0,197	0,907	1,757	2,079	1,912	1,825	2,012
PGUR	g/plt	12,2	4,90	111,0	0,900	108,3	113,7	1,000	100,1	111,0	121,9	0,424	99,1	105,2	120,5	101,2	116,7	123,2
PG	"	9,1	9,58	100,7	0,367	99,7	101,7	1,000	89,2	104,6	108,4	0,346	88,0	104,9	106,3	90,4	104,3	110,6
QG	g/m^2	9,8	2,56	629,3	0,301	626,4	632,1	1,000	558,1	652,2	677,6	0,341	555,8	657,3	666,1	560,4	647,0	689,0
QN-GR	"	10,6	3,86	10,13	0,048	10,12	10,14	1,000	9,20	10,57	10,61	0,703	9,23	10,80	10,34	9,17	10,35	10,88
QP-GR	"	10,4	2,22	1,94	0,431	1,93	1,96	1,000	1,73	2,03	2,06	0,709	1,73	2,06	1,99	1,74	2,01	2,12
QK-GR	"	9,9	1,88	2,73	0,422	2,71	2,75	1,000	2,48	2,81	2,89	0,810	2,49	2,84	2,79	2,47	2,77	2,99
QMG-GR	"	11,5	4,42	0,88	0,223	0,88	0,87	1,000	0,79	0,92	0,93	0,143	0,80	0,93	0,92	0,79	0,90	0,93
PTFR	"	13,4	1,74	131,7	0,816	128,9	134,5	0,983	135,1	137,1	122,7	0,279	132,3	132,3	121,9	137,9	142,3	133,3
NTF	%	13,7	5,76	0,83	0,279	0,83	0,83	0,975	0,86	0,85	0,77	0,495	0,85	0,87	0,75	0,87	0,84	0,80
P_2O_5TF	%	24,3	1,00	0,098	0,081	0,098	0,098	1,000	0,106	0,109	0,079	0,296	0,108	0,109	0,076	0,103	0,109	0,083
KTF	%	15,5	0,75	1,310	0,373	1,332	1,288	0,386	1,313	1,279	1,338	0,405	1,369	1,291	1,336	1,257	1,267	1,340
CATF	%	22,0	1,67	0,122	0,974	0,114	0,129	0,995	0,108	0,120	0,136	0,274	0,104	0,112	0,126	0,113	0,128	0,147
MGTF	%	17,4	3,27	0,683	0,330	0,689	0,677	0,174	0,672	0,693	0,684	0,468	0,665	0,722	0,680	0,678	0,664	0,688
NATF	%	27,6	2,96	0,021	0,882	0,020	0,022	0,243	0,021	0,022	0,020	0,243	0,021	0,020	0,019	0,022	0,023	0,022
MG/CATF	-	16,7	7,24	5,873	0,999	6,312	5,434	0,999	6,429	6,003	5,187	0,717	6,637	6,675	5,624	6,222	5,332	4,750
QTFR	g/m^2	12,3	2,01	822,6	0,687	810,3	834,9	0,990	845,1	855,8	767,0	0,278	836,5	830,1	764,3	853,7	881,5	769,7
QNTF	g/m^2	19,2	4,97	6,827	0,380	6,627	6,967	0,998	7,240	7,302	5,939	0,027	7,115	7,197	5,749	7,364	7,406	6,130
QPTF	g/m^2	28,5	0,80	0,814	0,382	0,800	0,828	1,000	0,893	0,936	0,613	0,239	0,908	0,903	0,588	0,878	0,968	0,637
QKTF	"	16,5	6,51	10,73	0,157	10,77	10,69	0,730	11,06	10,88	10,25	0,361	11,38	10,73	10,20	10,74	11,03	10,30
QCATF	"	27,6	7,41	1,004	0,972	0,928	1,080	0,788	0,921	1,040	1,052	0,196	0,874	0,940	0,971	0,968	1,140	1,133

T. 2.1.3. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE ...1..
PREMIER CYCLE (1984) - CARACTERISTIQUES "PLANTE".

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
													Calcaire			Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
QMGTF	g/m²	21,6	4,55	5,622	0,141	5,597	5,646	0,834	5,692	5,925	5,249	0,128	5,582	5,997	5,213	5,802	5,852	5,285
QTN	"	9,4	4,81	16,96	0,447	16,81	17,10	0,993	16,44	17,87	16,55	0,459	16,34	17,99	16,09	16,54	17,76	17,01
QTP	"	11,9	2,01	2,755	0,482	2,727	2,783	0,998	2,624	2,970	2,672	0,459	2,633	2,966	2,583	2,614	2,974	2,762
QTK	"	13,3	6,50	13,46	0,086	13,48	13,44	0,4442	13,54	13,69	13,14	0,406	13,87	13,58	12,99	13,21	13,80	13,29
QTMG	"	18,5	4,68	6,499	0,123	6,478	6,520	0,823	6,484	6,840	6,174	0,143	6,377	6,924	6,133	6,570	6,756	6,215

2.2. Récapitulatif des analyses de variance des paramètres "sol" observés en début de cycle (84.A)
(pour les sigles cf l'annexe 1.2.).

T.2.2.1. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE 1984.(A)
ETAT DES CARACTERISTIQUES "SOL" DANS L'HORIZON (0-20)cm AVANT L'APPLICATION DES AMENDEMENTS.

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature x dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
AO-20	%	9,3	19,53	47,18	0,401	46,90	47,46	0,216	46,72	47,21	47,62	0,848	47,34	47,50	45,86	46,10	46,92	49,38
LFO-20	%	9,0	2,48	16,29	0,477	16,17	16,42	0,820	16,52	15,83	16,54	0,643	16,74	15,59	16,17	16,29	16,06	16,92
LGO-20	%	14,9	11,00	9,00	0,450	9,12	8,88	0,951	8,65	8,78	9,57	0,726	8,89	9,14	9,33	8,40	8,41	9,82
SFO-20	%	14,2	13,07	14,38	0,459	14,23	14,54	0,923	14,67	14,90	13,58	0,222	14,30	14,75	13,64	15,03	15,05	13,53
SGO-20	%	66,0	37,64	8,10	0,461	8,50	7,70	0,058	8,28	8,24	7,80	0,809	7,44	8,26	9,81	9,11	8,22	5,78
HCCO-20	%	9,6	20,81	44,61	0,478	44,24	44,98	0,137	44,50	44,34	44,99	0,775	44,96	44,40	43,36	44,04	44,28	46,62
RUO-20	%	15,9	16,62	16,16	0,847	15,72	16,59	0,003	16,13	16,18	16,16	0,416	15,95	15,93	15,28	16,30	16,44	17,04
CO-20	°/oo	8,3	3,23	25,52	0,493	25,69	25,35	0,903	26,08	24,75	25,73	0,900	26,27	24,13	26,18	25,40	25,37	25,28
NO-20	°/oo	6,6	3,46	2,05	0,784	2,07	2,03	0,710	2,07	2,01	2,07	0,766	2,12	2,00	2,09	2,02	2,03	2,04
C/NO-20	-	5,6	6,83	12,46	0,357	12,42	12,50	0,656	12,60	12,30	12,47	0,677	12,62	12,09	12,55	12,59	12,52	12,38
MOO-20	%	8,3	3,40	4,40	0,472	4,43	4,36	0,864	4,49	4,28	4,43	0,912	4,61	4,17	4,51	4,37	4,38	4,34
PAO	ppm	36,9	3,73	15,83	0,346	15,17	16,50	0,402	14,83	16,25	16,42	0,825	15,67	15,83	14,00	14,00	16,67	18,83
PT	ppm	13,1	15,37	408,5	0,381	414,2	402,8	0,678	418,8	395,4	411,3	0,382	42,67	392,5	423,3	410,8	398,3	399,2
KO-20	meq/100g	23,4	4,38	0,271	0,768	0,261	0,280	0,292	0,262	0,271	0,278	0,328	0,262	0,260	0,262	0,262	0,283	0,294
NAO-20	"	30,6	10,98	0,358	0,434	0,368	0,347	0,683	0,386	0,340	0,348	0,84	0,421	0,360	0,324	0,351	0,320	0,372
CAO-20	"	11,7	4,98	4,531	0,335	4,558	4,503	0,753	4,646	4,387	4,558	0,258	4,708	4,450	4,517	4,583	4,325	4,600
MGO-20	"	10,4	19,82	41,904	0,353	41,414	42,394	0,653	41,771	42,900	41,042	0,923	42,383	43,033	38,825	41,158	42,767	43,258
SBE	"	9,9	22,58	47,063	0,418	46,602	47,524	0,479	47,065	47,899	46,226	0,919	47,775	48,103	43,927	46,355	47,694	48,524
TO-20	"	7,3	2,09	52,560	0,118	52,625	52,494	0,173	52,608	52,192	52,879	0,950	54,208	52,108	51,558	51,008	52 275	54,200
S/TO-20	-	7,7	5,16	0,896	0,713	0,887	0,905	0,909	0,898	0,918	0,873	0,414	0,889	0,923	0,850	0,907	0,913	0,895
CA/MG 0-20	-	11,2	1,33	0,108	0,839	0,111	0,106	0,979	0,111	0,102	0,112	0,758	0,111	0,104	0,117	0,112	0,101	0,106
RAPO-20	-	20,9	3,30	179,3	0,355	183,5	175,1	0,298	179,2	184,0	174,7	0,670	181,3	197,3	174,9	177,1	170,7	177,6

T.2.2.2. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE 1984(A)

ETAT DES CARACTERISTIQUES "SOL" DANS L'HORIZON (0-20)cm AVANT L'APPLICATION DES AMENDEMENTS.

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
PH-H2O	-	2,0	2,10	5,811	0,964	5,781	5,842	0,842	5,808	5,846	5,779	0,632	5,750	5,825	5,767	5,867	5,867	5,792
PH-KCL	-	2,2	3,33	4,787	0,766	4,772	4,803	0,818	4,788	4,817	4,758	0,425	4,758	4,825	4,733	4,817	4,808	4,783
KT-IA	meq/100g	17,5	22,22	0,968	0,221	0,974	0,963	0,675	0,981	0,998	0,926	0,456	1,012	1,007	0,902	0,950	0,988	0,950
NAT-IA	"	22,4	0,85	0,474	0,452	0,467	0,482	0,935	0,518	0,447	0,459	0,980	0,558	0,437	0,405	0,477	0,458	0,513
CAT-IA	"	9,5	14,00	6,725	0,005	6,731	6,720	0,916	6,695	6,953	6,527	0,409	6,796	6,815	6,581	6,595	7,092	6,474
MGT-IA	"	11,6	1,24	109,8	0,951	106,7	112,9	0,840	109,9	113,4	106,2	0,220	106,9	111,6	101,7	112,9	115,3	110,6

T.2.2.3. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE 1984 (A)
ETAT DES CARACTERISTIQUES "SOL" DANS L'HORIZON (20-40)cm AVANT L'APPLICATION DES AMENDEMENTS.

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
A2	%	10,8	18,87	48,63	0,008	48,63	48,63	0,485	48,82	47,65	49,41	0,747	49,75	48,21	47,92	47,89	47,10	50,90
LF2	%	7,1	3,20	15,87	0,413	15,98	15,76	0,376	15,70	15,89	16,02	0,191	15,78	16,13	16,05	15,63	15,66	15,99
LG2	%	9,5	3,36	8,76	0,416	8,68	8,84	0,617	8,92	8,78	8,58	0,757	9,08	8,57	8,38	8,76	8,98	8,78
SF2	%	10,5	8,83	14,05	0,713	13,86	14,24	0,384	13,96	14,29	13,89	0,335	13,55	14,18	13,85	14,38	14,41	13,93
SG2	%	71,0	15,18	8,32	0,218	8,51	8,13	0,294	8,54	8,91	7,51	0,750	7,58	8,60	9,36	9,50	9,22	5,67
HCC2	%	11,4	12,03	47,39	0,170	47,52	47,26	0,102	47,19	47,17	47,80	0,425	47,91	47,93	46,73	46,48	46,42	48,88
HPFP2	%	10,9	8,76	30,44	0,137	30,37	30,50	0,697	30,22	29,81	31,28	0,482	30,76	29,73	30,63	29,68	29,90	31,93
RU2	%	19,2	9,63	16,95	0,385	17,15	16,75	0,317	16,97	17,36	16,53	0,421	17,15	18,2	16,10	16,79	16,52	16,95
C2	%	14,4	3,13	2,112	0,825	2,162	2,062	0,446	2,167	2,090	2,077	0,341	2,242	2,093	2,150	2,092	2,087	2,005
N2	°/oo	11,3	0,14	1,713	0,838	1,746	1,680	0,359	1,782	1,682	1,723	0,122	1,769	1,699	1,768	1,696	1,665	1,678
C/N2	-	7,4	3,08	12,34	0,487	12,41	12,26	0,825	12,53	12,43	12,05	0,466	12,73	12,31	12,19	12,33	12,54	11,91
MO2	%	13,0	1,04	3,654	0,762	3,722	3,586	0,402	3,733	3,596	3,633	0,211	3,850	3,617	3,700	3,617	3,575	3,567
PAO2	ppm	40,1	1,44	9,167	0,295	9,333	9,000	0,020	9,083	9,292	9,125	0,793	9,750	10,083	8,167	8,417	8,500	10,083
PT2	ppm	14,9	0,22	314,6	0,706	320,6	308,6	0,391	322,5	310,0	311,3	0,056	330,8	315,8	315,0	314,2	304,2	307,5
K2	meq %	33,4	3,22	0,196	0,480	0,201	0,191	0,828	0,210	0,175	0,203	0,905	0,238	0,179	0,188	0,182	0,172	0,219
NA2	"	23,4	1,42	0,336	0,879	0,351	0,321	0,419	0,353	0,327	0,327	0,906	0,397	0,319	0,336	0,310	0,335	0,318
CA2	"	10,0	1,05	4,407	0,873	4,489	4,325	0,114	4,425	4,371	4,425	0,117	4,542	4,425	4,500	4,308	4,317	4,350
MG2	"	11,9	22,65	43,35	0,387	43,03	43,67	0,472	42,98	42,74	44,33	0,402	43,16	43,11	42,83	42,79	42,37	45,84
S2	"	10,6	19,16	48,29	0,277	48,07	48,50	0,500	47,96	47,61	49,29	0,626	48,33	48,03	47,85	47,59	47,19	50,73
T2	"	6,8	12,25	52,81	0,224	52,93	52,69	0,482	52,83	52,19	53,40	0,866	53,93	52,50	52,35	51,73	51,88	54,44
SIT2	-	4,8	8,09	0,913	0,708	0,908	0,919	0,494	0,907	0,911	0,922	0,496	0,897	0,914	0,913	0,918	0,908	0,932
CA/MG2	-	17,9	12,10	0,102	0,768	0,105	0,100	0,209	0,104	0,103	0,100	0,330	0,106	0,104	0,106	0,102	0,102	0,095
RAP2	-	32,6	4,27	266,9	0,488	259,5	274,2	0,689	246,3	285,4	268,9	0,416	223,7	284,1	270,8	268,9	286,7	267,1

T.2.2.4. INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE 1984(A)
ETAT DES CARACTERISTIQUES "SOL" DANS L'HORIZON (20-40)cm AVANT L'APPLICATION DES AMENDEMENTS.

PARAMETRES		CV	X^2 des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire			Gypse			
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
PHE2	-	5,6	1,81	6,033	0,116	6,039	6,028	0,430	5,962	6,050	6,087	0,311	5,959	6,025	6,142	5,975	6,075	6,033
PHK2	-	2,4	4,08	4,872	0,941	4,844	4,900	0,618	4,862	4,900	4,854	0,332	4,842	4,883	4,808	4,883	4,917	4,900
KT2A	meq %	15,4	3,95	0,952	0,323	0,959	0,944	0,468	0,966	0,968	0,921	0,748	1,014	0,963	0,900	0,917	0,973	0,942
NAT2A	"	29,7	17,77	0,686	0,151	0,691	0,682	0,956	0,776	0,634	0,648	0,355	0,813	0,619	0,640	0,739	0,649	0,657
CAT2A	"	10,9	12,30	6,587	0,022	6,590	6,585	0,451	6,652	6,657	6,454	0,133	6,688	6,595	6,486	6,615	6,718	6,422
MGT2A	"	12,5	0,91	118,7	0,976	114,4	122,9	0,910	118,1	123,8	114,0	0,397	113,4	122,8	107,1	122,8	124,9	121,0

2.3. Récapitulatif des analyses de variance des paramètres "sol" observés en fin de cycle (84 B)
(pour les sigles cf l'annexe 1.2.).

T.2.3 INFLUENCE DE TROIS DOSES DE CHAUX DE DEUX AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAÏS SUR VERTISOL HYPER-MAGNESIEN : CYCLE .1984(B)
ETAT DES CARACTERISTIQUES "SOL" DE L'HORIZON (0-20)cm A LA FIN DU PREMIER CYCLE, APRES APPORT DES AMENDEMENTS CALCIQUES.

PARAMETRES		CV*	X^2** des V.R.	$\bar{X}$	INFLUENCE DES FACTEURS CONTROLES													
					Nature de l'amendement			Dose de CaO				Interaction nature * dose						
												Calcaire				Gypse		
Sigles	Unités	%			Pté F	Calcaire	Gypse	Pté F	4t/ha	8t/ha	12t/ha	Pté F	4t/ha	8t/ha	12t/ha	4t/ha	8t/ha	12t/ha
C1B	%	6,9	8,89	2,626	0,782	2,653	2,599	0,960	2,702	2,563	2,613	0,668	2,766	2,547	2,647	2,639	2,579	2,579
N1B	°/oo	6,6	6,80	2,044	0,773	2,064	2,024	0,996	2,124	1,982	2,027	0,230	2,155	1,986	2,051	2,092	1,978	2,002
C/N1B	-	2,8	4,98	12,85	0,092	12,86	12,85	0,900	12,72	12,94	12,90	0,873	12,84	12,83	12,90	12,61	13,05	12,89
PHE1B	-	3,6	3,19	7,246	0,947	7,308	7,183	1,000	6,762	7,367	7,608	0,170	6,850	7,408	7,667	6,675	7,325	7,550
PHEKCII IIB	-	4,2	0,09	6,215	0,911	6,269	6,161	1,000	5,708	6,325	6,612	0,227	5,792	6,375	6,642	5,625	6,275	6,583.

* Il s'agit du C.V. de l'analyse de variance du carré latin

** Il s'agit du X^2 de BARTLETT du test d'homogénéité des variances résiduelles, les blocs étant pris sur les lignes.

3 - ANALYSES DE VARIANCE.

3.1. Analyses de variance des paramètres "plante"
(pour les sigles cf l'annexe 1.1.).

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: DL
unite : nbre pied/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	14.469	14.765	15.111	14.864	13.926	14.667	15.111	13.679	14.370	14.568	14.469	14.123
X 12k	15.012	14.519	14.667	15.506	14.815	14.420	15.012	15.012	14.765	14.815	14.519	14.420
X 13k	14.173	14.370	14.370	14.815	14.716	14.914	15.012	14.370	14.420	15.210	14.815	14.222
X 21k	14.765	14.222	15.210	14.617	14.963	14.667	14.617	14.963	14.864	14.667	14.370	14.617
X 22k	14.864	14.222	14.123	15.111	15.062	14.667	14.914	15.407	14.321	14.617	15.012	14.222
X 23k	14.765	14.469	14.222	14.568	14.222	14.321	14.617	15.111	14.519	15.111	14.420	14.469

2 - MOYENNES ET ECARTS RELATIFS

X ... = 14.652

X 1.. = 14.639 (-0.08) X 2..= 14.664 (0.08)

X .1. = 14.611 (-0.28) X .2. = 14.751 (0.68) X .3. = 14.593 (-0.40)

X ..1 = 14.656 (0.03) X ..2 = 14.647 (-0.03)

X 11. = 14.510 (-0.96) X 12. = 14.790 (0.95) X 13. = 14.617 (-0.23)
X 21. = 14.712 (0.41) X 22. = 14.712 (0.41) X 23. = 14.568 (-0.57)

X 1.1 = 14.653 (0.01) X 1.2 = 14.626 (-0.18) X 2.1 = 14.658 (0.05) X 2.2 = 14.669 (0.12)

X .11 = 14.687 (0.24) X .12 = 14.535 (-0.80)
X .21 = 14.757 (0.72) X .22 = 14.745 (0.64)
X .31 = 14.523 (-0.88) X .32 = 14.663 (0.07)

X 111 = 14.576 (-0.51) X 121 = 14.798 (1.00) X 131 = 14.584 (-0.46)
X 112 = 14.444 (-1.41) X 122 = 14.782 (0.89) X 132 = 14.650 (-0.01)
X 211 = 14.798 (1.00) X 221 = 14.716 (0.44) X 231 = 14.461 (-1.30)
X 212 = 14.626 (-0.18) X 222 = 14.708 (0.38) X 232 = 14.675 (0.16)

X 11 = 14.551 (-0.68) X 12 = 14.765 (0.78) X 13 = 14.613 (-0.26)
X 14 = 14.819 (1.14) X 15 = 14.687 (0.24) X 16 = 14.473 (-1.22)

X m1 = 14.576 (-0.51) X m2 = 14.815 (1.11) X m3 = 14.712 (0.41)
X m4 = 14.564 (-0.60) X m5 = 14.675 (0.16) X m6 = 14.568 (-0.57)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.68702E-02 (2.0)	1.03339E-01 (2.2)	7.78472E-02 (1.9)
VR2 (cv2%)	1.87045E-01 (3.0)	1.21933E-01 (2.4)	
VR3 (cv3%)	1.49961E-01 (2.6)	1.62983E-01 (2.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.97700E+00	1.10286E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.126 (0.275)	0.106 (0.254)	0.141 (0.288)
- DOSE	2.073 (0.855)	1.743 (0.806)	2.313 (0.882)
- AMENDEMENT*DOSE	1.636 (0.786)	1.376 (0.729)	1.826 (0.814)
- SUBSIDIAIRE	0.007 (0.063)	0.010 (0.079)	
- AMENDEMENT*SUBSIDIAIRE	0.044 (0.171)	0.041 (0.164)	
- DOSE*SUBSIDIAIRE	0.854 (0.441)	0.786 (0.470)	
- AMENDEM*DOSE*SUBSID	0.096 (0.092)	0.089 (0.085)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.085 (0.232)	0.081 (0.226)	
- DOSE	1.402 (0.746)	1.334 (0.728)	
- AMENDEMENT*DOSE	1.107 (0.661)	1.053 (0.642)	
- SUBSIDIAIRE	0.009 (0.080)	0.009 (0.078)	
- AMENDEMENT*SUBSIDIAIRE	0.052 (0.184)	0.049 (0.180)	
- DOSE*SUBSIDIAIRE	0.998 (0.378)	0.949 (0.396)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984
parametre: DR
unite : plt/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.469	6.321	6.420	6.420	6.025	6.321	6.272	6.321	6.420	6.272	6.272	6.272
X 12k	5.827	6.173	6.370	6.222	6.370	6.272	6.765	6.272	6.074	6.123	6.272	6.469
X 13k	6.964	6.272	6.123	6.420	6.321	5.679	5.877	6.321	6.272	6.370	6.519	6.272
X 21k	5.975	6.420	5.827	6.025	6.469	6.222	6.123	6.469	5.926	6.420	6.420	6.173
X 22k	6.272	6.272	6.321	5.975	6.321	6.321	6.074	6.321	5.877	6.173	6.272	6.272
X 23k	6.469	6.519	6.519	5.778	6.321	6.272	6.272	6.519	6.222	6.123	6.025	5.778

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.251

X 1.. = 6.287 (0.57) X 2..= 6.215 (-0.57)

X .1. = 6.261 (0.16) X .2. = 6.237 (-0.23) X .3. = 6.255 (0.07)

X ..1 = 6.257 (0.09) X ..2 = 6.246 (-0.09)

X 11. = 6.317 (1.05) X 12. = 6.267 (0.26) X 13. = 6.276 (0.39)
X 21. = 6.206 (-0.72) X 22. = 6.206 (-0.72) X 23. = 6.235 (-0.26)

X 1.1 = 6.307 (0.90) X 1.2 = 6.266 (0.24) X 2.1 = 6.206 (-0.72) X 2.2 = 6.225 (-0.42)

X .11 = 6.218 (-0.53) X .12 = 6.305 (0.86)
X .21 = 6.235 (-0.26) X .22 = 6.239 (-0.20)
X .31 = 6.317 (1.05) X .32 = 6.193 (-0.92)

X 111 = 6.313 (0.99) X 121 = 6.280 (0.46) X 131 = 6.329 (1.25)
X 112 = 6.321 (1.12) X 122 = 6.255 (0.07) X 132 = 6.222 (-0.46)
X 211 = 6.123 (-2.04) X 221 = 6.189 (-0.99) X 231 = 6.305 (0.86)
X 212 = 6.288 (0.59) X 222 = 6.222 (-0.46) X 232 = 6.165 (-1.38)

X L1 = 6.321 (1.12) X L2 = 6.202 (-0.79) X L3 = 6.243 (-0.13)
X L4 = 6.300 (0.79) X L5 = 6.189 (-0.99) X L6 = 6.251 (-0.00)

X M1 = 6.300 (0.79) X M2 = 6.325 (1.18) X M3 = 6.181 (-1.12)
X M4 = 6.247 (-0.07) X M5 = 6.156 (-1.51) X M6 = 6.296 (0.72)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.90317E-02 (3.9)	5.41381E-02 (3.7)	5.94828E-02 (3.9)
VR2 (cv2%)	4.26493E-02 (3.3)	4.04545E-02 (3.2)	
VR3 (cv3%)	5.15911E-02 (3.6)	5.20300E-02 (3.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.25241E-01	1.53966E-01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.551 (0.778)	1.692 (0.797)	1.540 (0.773)
- DOSE	0.067 (0.065)	0.073 (0.071)	0.067 (0.065)
- AMENDEMENT*DOSE	0.131 (0.123)	0.143 (0.133)	0.130 (0.122)
- SUBSIDIAIRE	0.051 (0.176)	0.054 (0.180)	
- AMENDEMENT*SUBSIDIAIRE	0.318 (0.416)	0.315 (0.414)	
- DOSE*SUBSIDIAIRE	1.301 (0.710)	1.290 (0.707)	
- AMENDEM*DOSE*SUBSID	0.261 (0.224)	0.258 (0.223)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.706 (0.805)	1.771 (0.814)	
- DOSE	0.074 (0.072)	0.077 (0.074)	
- AMENDEMENT*DOSE	0.145 (0.134)	0.150 (0.139)	
- SUBSIDIAIRE	0.040 (0.164)	0.042 (0.167)	
- AMENDEMENT*SUBSIDIAIRE	0.305 (0.410)	0.317 (0.417)	
- DOSE*SUBSIDIAIRE	1.250 (0.705)	1.297 (0.718)	
- AMENDEM*DOSE*SUBSID	0.251 (0.218)	0.260 (0.225)	

ANALYSE DE VARIANCE
année:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984
parametre: DE
unite : nbre/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.086	5.679	7.062	5.728	5.580	5.333	5.827	5.728	6.025	5.728	5.580	5.531
X 12k	5.531	5.481	5.531	6.321	5.037	2.222	6.321	6.123	5.728	5.136	5.580	5.926
X 13k	6.222	5.728	5.975	6.123	5.728	5.235	5.728	6.123	5.975	5.778	5.778	6.173
X 21k	5.432	5.580	5.926	6.074	5.531	5.580	5.531	5.679	5.383	5.679	6.074	5.877
X 22k	5.877	6.074	5.630	5.284	5.778	6.123	5.580	5.284	5.235	5.284	6.025	5.679
X 23k	6.123	5.877	5.877	5.481	5.827	5.776	5.728	6.222	4.840	5.531	4.988	5.185

2 - MOYENNES ET ECARTS RELATIFS

X ... = 5.667

X 1.. = 5.678 (0.18) X 2..= 5.657 (-0.18)

X .1. = 5.718 (0.90) X .2. = 5.533 (-2.37) X .3. = 5.751 (1.48)

X ..1 = 5.713 (0.81) X ..2 = 5.621 (-0.81)

X 11. = 5.741 (1.29) X 12. = 5.412 (-4.51) X 13. = 5.881 (3.76)
X 21. = 5.695 (0.50) X 22. = 5.654 (-0.23) X 23. = 5.621 (-0.81)

X 1.1 = 5.794 (2.24) X 1.2 = 5.561 (-1.88) X 2.1 = 5.632 (-0.62) X 2.2 = 5.682 (0.25)

X .11 = 5.753 (1.51) X .12 = 5.683 (0.28)
X .21 = 5.654 (-0.23) X .22 = 5.412 (-4.51)
X .31 = 5.733 (1.15) X .32 = 5.770 (1.80)

X 111 = 5.860 (3.40) X 121 = 5.621 (-0.81) X 131 = 5.901 (4.13)
X 112 = 5.621 (-0.81) X 122 = 5.202 (-8.22) X 132 = 5.860 (3.40)
X 211 = 5.646 (-0.38) X 221 = 5.687 (0.35) X 231 = 5.564 (-1.83)
X 212 = 5.745 (1.37) X 222 = 5.621 (-0.81) X 232 = 5.679 (0.21)

X L1 = 5.724 (1.00) X L2 = 5.918 (4.42) X L3 = 5.313 (-6.26)
X L4 = 5.823 (2.75) X L5 = 5.527 (-2.48) X L6 = 5.700 (0.57)

X M1 = 5.782 (2.02) X M2 = 5.798 (2.31) X M3 = 5.778 (1.95)
X M4 = 5.782 (2.02) X M5 = 5.630 (-0.67) X M6 = 5.235 (-7.64)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.17515E-01 (11.4)	4.13857E-01 (11.4)	3.75302E-01 (10.8)
VR2 (cv2%)	1.63261E-01 (7.1)	1.95370E-01 (7.8)	
VR3 (cv3%)	2.13351E-01 (8.2)	2.06929E-01 (8.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.11840E+00	2.91689E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.018 (0.111)	0.018 (0.112)	0.020 (0.117)
- DOSE	0.795 (0.466)	0.802 (0.463)	0.884 (0.428)
- AMENDEMENT*DOSE	0.912 (0.417)	0.920 (0.414)	1.015 (0.618)
- SUBSIDIAIRE	0.931 (0.381)	0.778 (0.422)	
- AMENDEMENT*SUBSIDIAIRE	1.684 (0.796)	1.736 (0.803)	
- DOSE*SUBSIDIAIRE	0.561 (0.417)	0.578 (0.427)	
- AMENDEM*DOSE*SUBSID	0.084 (0.081)	0.087 (0.084).	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.026 (0.134)	0.026 (0.134)	
- DOSE	1.144 (0.673)	1.150 (0.675)	
- AMENDEMENT*DOSE	1.313 (0.723)	1.320 (0.724)	
- SUBSIDIAIRE	0.524 (0.479)	0.527 (0.478)	
- AMENDEMENT*SUBSIDIAIRE	1.239 (0.730)	1.245 (0.731)	
- DOSE*SUBSIDIAIRE	0.413 (0.330)	0.415 (0.332)	
- AMENDEM*DOSE*SUBSID	0.062 (0.060)	0.062 (0.061)	

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.17515E-01 (11.4)	4.13857E-01 (11.4)	3.75302E-01 (10.8)
VR2 (cv2%)	1.63261E-01 (7.1)	1.95370E-01 (7.8)	
VR3 (cv3%)	2.13351E-01 (8.2)	2.06929E-01 (8.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.11840E+00	2.91689E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.018 (0.111)	0.018 (0.112)	0.020 (0.117)
- DOSE	0.795 (0.466)	0.802 (0.463)	0.884 (0.428)
- AMENDEMENT*DOSE	0.912 (0.417)	0.920 (0.414)	1.015 (0.618)
- SUBSIDIAIRE	0.931 (0.381)	0.779 (0.422)	
- AMENDEMENT*SUBSIDIAIRE	1.684 (0.796)	1.736 (0.803)	
- DOSE*SUBSIDIAIRE	0.561 (0.417)	0.578 (0.427)	
- AMENDEM*DOSE*SUBSID	0.084 (0.081)	0.087 (0.084)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.026 (0.134)	0.026 (0.134)	
- DOSE	1.144 (0.673)	1.150 (0.675)	
- AMENDEMENT*DOSE	1.313 (0.723)	1.320 (0.724)	
- SUBSIDIAIRE	0.524 (0.479)	0.527 (0.478)	
- AMENDEMENT*SUBSIDIAIRE	1.239 (0.730)	1.245 (0.731)	
- DOSE*SUBSIDIAIRE	0.413 (0.330)	0.415 (0.332)	
- AMENDEM*DOSE*SUBSID	0.062 (0.060)	0.062 (0.061)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 12/09/84
parametre: H 38
unite : cm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	17.080	17.470	14.560	13.720	13.420	13.920	11.420	14.560	14.500	11.970	14.000	11.720
X 12k	14.580	12.940	13.470	13.610	13.000	12.530	16.250	14.640	11.310	13.410	12.360	13.920
X 13k	13.560	12.860	12.330	15.030	12.560	12.500	12.140	12.640	12.970	11.250	12.750	14.390
X 21k	16.440	15.560	14.830	13.500	17.030	16.970	14.110	12.310	13.890	14.560	17.420	15.750
X 22k	14.080	13.140	12.720	14.170	13.220	12.890	13.670	16.140	15.420	14.330	12.000	13.830
X 23k	13.000	12.690	12.690	13.720	15.080	14.060	13.690	13.670	14.220	9.920	11.810	12.060

2 - MOYENNES ET ECARTS RELATIFS

X ... = 13.749

X 1.. = 13.482 (-1.94) X 2..= 14.016 (1.94)

X .1. = 14.613 (6.28) X .2. = 13.651 (-0.71) X .3. = 12.983 (-5.57)

X ..1 = 13.822 (0.53) X ..2 = 13.676 (-0.53)

X 11. = 14.028 (2.03) X 12. = 13.502 (-1.80) X 13. = 12.915 (-6.07)
X 21. = 15.197 (10.54) X 22. = 13.801 (0.38) X 23. = 13.051 (-5.08)

X 1.1 = 13.459 (-2.11) X 1.2 = 13.504 (-1.78) X 2.1 = 14.184 (3.17) X 2.2 = 13.848 (0.72)

X .11 = 14.892 (8.31) X .12 = 14.334 (4.26)
X .21 = 13.507 (-1.76) X .22 = 13.796 (0.34)
X .31 = 13.067 (-4.96) X .32 = 12.899 (-6.18)

X 111 = 14.163 (3.01) X 121 = 13.495 (-1.85) X 131 = 12.718 (-7.50)
X 112 = 13.893 (1.05) X 122 = 13.508 (-1.75) X 132 = 13.112 (-4.64)
X 211 = 15.620 (13.61) X 221 = 13.518 (-1.68) X 231 = 13.415 (-2.43)
X 212 = 14.775 (7.46) X 222 = 14.083 (2.43) X 232 = 12.687 (-7.73)

X 11 = 14.450 (5.10) X 12 = 13.696 (-0.39) X 13 = 13.932 (1.33)
X 14 = 13.770 (0.15) X 15 = 13.146 (-4.39) X 16 = 13.501 (-1.81)

X m1 = 15.405 (12.04) X m2 = 14.137 (2.82) X m3 = 13.383 (-2.66)
X m4 = 13.504 (-1.78) X m5 = 13.138 (-4.44) X m6 = 12.927 (-5.98)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.93300E+00 (12.5)	1.40565E+00 (8.6)	1.18500E+00 (7.9)
VR2 (cv2%)	1.33720E+00 (8.4)	1.79447E+00 (9.7)	
VR3 (cv3%)	1.36002E+00 (8.5)	1.26856E+00 (8.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.51070E+00	2.65783E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.755 (0.805)	3.661 (0.936)	4.343 (0.952)
- DOSE	5.494 (0.990)	11.463 (1.000)	13.598 (1.000)
- AMENDEMENT*DOSE	0.631 (0.455)	1.317 (0.715)	1.562 (0.767)
- SUBSIDIAIRE	0.284 (0.380)	0.212 (0.334)	
- AMENDEMENT*SUBSIDIAIRE	0.482 (0.499)	0.517 (0.486)	
- DOSE*SUBSIDIAIRE	0.792 (0.468)	0.849 (0.443)	
- AMENDEM*DOSE*SUBSID	0.803 (0.463)	0.861 (0.438)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.590 (0.890)	3.740 (0.944)	
- DOSE	8.110 (0.999)	11.710 (1.000)	
- AMENDEMENT*DOSE	0.932 (0.403)	1.345 (0.731)	
- SUBSIDIAIRE	0.191 (0.332)	0.276 (0.392)	
- AMENDEMENT*SUBSIDIAIRE	0.330 (0.425)	0.476 (0.500)	
- DOSE*SUBSIDIAIRE	0.542 (0.410)	0.783 (0.466)	
- AMENDEM*DOSE*SUBSID	0.550 (0.414)	0.794 (0.462)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/09/84
parametre: H 45
unite : cm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	27.920	27.470	23.610	22.830	19.940	22.250	17.940	22.000	21.500	19.310	20.330	22.330
X 12k	23.860	20.670	20.420	21.250	20.280	18.920	24.580	23.420	18.000	21.750	17.250	18.170
X 13k	22.030	21.110	20.670	22.920	19.030	20.280	17.720	19.970	19.640	17.310	17.920	18.420
X 21k	25.030	24.610	23.610	23.850	25.500	25.920	21.060	20.060	22.970	22.750	28.500	22.720
X 22k	22.190	21.060	19.810	22.170	20.750	20.470	21.330	25.220	24.190	23.070	21.500	22.920
X 23k	21.060	21.920	21.560	20.390	21.750	20.560	21.390	21.030	22.440	16.890	18.000	17.440

2 - MOYENNES ET ECARTS RELATIFS

X ... = 21.510

X 1.. = 20.917 (-2.76) X 2..= 22.102 (2.76)

X .1. = 23.084 (7.32) X .2. = 21.385 (-0.58) X .3. = 20.060 (-6.74)

X ..1 = 21.536 (0.12) X ..2 = 21.484 (-0.12)

X 11. = 22.286 (3.61) X 12. = 20.714 (-3.70) X 13. = 19.752 (-8.17)
X 21. = 23.882 (11.03) X 22. = 22.057 (2.54) X 23. = 20.369 (-5.30)

X 1.1 = 20.702 (-3.75) X 1.2 = 21.132 (-1.76) X 2.1 = 22.369 (3.99) X 2.2 = 21.836 (1.52)

X .11 = 23.159 (7.67) X .12 = 23.008 (6.97)
X .21 = 21.180 (-1.53) X .22 = 21.591 (0.38)
X .31 = 20.267 (-5.78) X .32 = 19.853 (-7.70)

X 111 = 21.873 (1.69) X 121 = 20.732 (-3.62) X 131 = 19.502 (-9.34)
X 112 = 22.698 (5.53) X 122 = 20.697 (-3.78) X 132 = 20.002 (-7.01)
X 211 = 24.445 (13.65) X 221 = 21.628 (0.55) X 231 = 21.033 (-2.22)
X 212 = 23.318 (8.41) X 222 = 22.485 (4.53) X 232 = 19.705 (-8.39)

X 11 = 23.244 (8.06) X 12 = 21.924 (1.93) X 13 = 21.304 (-0.96)
X 14 = 21.310 (-0.93) X 15 = 20.818 (-3.21) X 16 = 20.458 (-4.89)

X m1 = 23.981 (11.49) X m2 = 21.957 (2.08) X m3 = 21.497 (-0.06)
X m4 = 20.561 (-4.41) X m5 = 20.444 (-4.95) X m6 = 20.619 (-4.14)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	6.88755E+00 (12.2)	4.82856E+00 (10.2)	3.12832E+00 (8.2)
VR2 (cv2%)	2.70226E+00 (7.6)	2.86493E+00 (7.9)	
VR3 (cv3%)	2.36708E+00 (7.2)	2.33454E+00 (7.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.46176E+00	2.89129E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.672 (0.936)	5.237 (0.971)	8.084 (0.990)
- DOSE	8.003 (0.998)	11.416 (1.000)	17.620 (1.000)
- AMENDEMENT*DOSE	0.225 (0.197)	0.320 (0.267)	0.494 (0.378)
- SUBSIDIAIRE	0.018 (0.105)	0.017 (0.102)	
- AMENDEMENT*SUBSIDIAIRE	1.762 (0.806)	1.787 (0.809)	
- DOSE*SUBSIDIAIRE	0.450 (0.352)	0.456 (0.356)	
- AMENDEM*DOSE*SUBSID	1.637 (0.787)	1.660 (0.791)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	6.008 (0.983)	7.470 (0.992)	
- DOSE	13.097 (1.000)	16.283 (1.000)	
- AMENDEMENT*DOSE	0.368 (0.301)	0.457 (0.359)	
- SUBSIDIAIRE	0.011 (0.088)	0.014 (0.098)	
- AMENDEMENT*SUBSIDIAIRE	0.991 (0.325)	1.232 (0.728)	
- DOSE*SUBSIDIAIRE	0.253 (0.220)	0.315 (0.264)	
- AMENDEM*DOSE*SUBSID	0.921 (0.407)	1.145 (0.673)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 26/09/84
parametre: H 52
unite : cm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	59.440	57.030	48.670	42.530	39.470	44.190	34.780	41.690	43.310	36.420	39.390	43.58
X 12k	47.560	40.110	38.000	40.000	40.000	37.000	50.610	43.860	32.080	40.610	31.190	35.39
X 13k	39.060	39.060	39.060	44.810	35.720	37.470	32.440	37.390	37.530	30.000	33.890	35.25
X 21k	48.310	39.580	46.500	47.030	50.500	52.140	38.280	37.190	43.190	42.060	57.380	47.97
X 22k	43.470	42.610	37.060	40.860	38.530	38.190	42.390	47.810	49.310	44.970	42.140	46.58
X 23k	38.860	43.140	41.440	36.470	44.110	39.220	41.310	40.110	44.560	29.470	32.250	32.26

2 - MOYENNES ET ECARTS RELATIFS

X ... = 41.334

X 1.. = 40.239 (-2.65) X 2..= 42.429 (2.65)

X .1. = 45.035 (8.95) X .2. = 41.264 (-0.17) X .3. = 37.703 (-8.78)

X ..1 = 41.722 (0.94) X ..2 = 40.946 (-0.94)

X 11. = 44.208 (6.95) X 12. = 39.701 (-3.95) X 13. = 36.807 (-10.95)
X 21. = 45.861 (10.95) X 22. = 42.827 (3.61) X 23. = 38.600 (-6.61)

X 1.1 = 40.122 (-2.93) X 1.2 = 40.355 (-2.37) X 2.1 = 43.322 (4.81) X 2.2 = 41.537 (0.49)

X .11 = 45.785 (10.77) X .12 = 44.284 (7.14)
X .21 = 41.028 (-0.74) X .22 = 41.499 (0.40)
X .31 = 38.352 (-7.21) X .32 = 37.054 (-10.35)

X 111 = 44.177 (6.88) X 121 = 39.907 (-3.45) X 131 = 36.293 (-12.22)
X 112 = 44.240 (7.03) X 122 = 39.495 (-4.45) X 132 = 37.330 (-9.69)
X 211 = 47.393 (14.66) X 221 = 42.150 (1.97) X 231 = 40.422 (-2.21)
X 212 = 44.328 (7.24) X 222 = 43.503 (5.25) X 232 = 36.778 (-11.02)

X 11 = 44.352 (8.51) X 12 = 41.869 (1.30) X 13 = 41.378 (0.11)
X 14 = 40.655 (-1.64) X 15 = 39.459 (-4.54) X 16 = 39.789 (-3.74)

X m1 = 48.164 (16.52) X m2 = 42.322 (2.39) X m3 = 41.877 (1.32)
X m4 = 38.222 (-7.53) X m5 = 38.625 (-6.55) X m6 = 38.792 (-6.15)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.89354E+01 (16.9)	2.37942E+01 (11.8)	1.83243E+01 (10.4)
VR2 (cv2%)	1.48258E+01 (9.3)	1.62352E+01 (9.7)	
VR3 (cv3%)	1.50528E+01 (9.4)	1.47709E+01 (9.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.19132E+00	1.26249E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.765 (0.807)	3.630 (0.935)	4.714 (0.960)
- DOSE	6.592 (0.995)	13.557 (1.000)	17.603 (1.000)
- AMENDEMENT*DOSE	0.081 (0.078)	0.167 (0.152)	0.216 (0.191)
- SUBSIDIAIRE	0.731 (0.435)	0.668 (0.455)	
- AMENDEMENT*SUBSIDIAIRE	1.217 (0.720)	1.240 (0.724)	
- DOSE*SUBSIDIAIRE	0.469 (0.364)	0.478 (0.369)	
- AMENDEM*DOSE*SUBSID	1.130 (0.660)	1.152 (0.667)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.022 (0.915)	4.662 (0.966)	
- DOSE	11.285 (1.000)	17.411 (1.000)	
- AMENDEMENT*DOSE	0.139 (0.129)	0.214 (0.190)	
- SUBSIDIAIRE	0.379 (0.452)	0.585 (0.454)	
- AMENDEMENT*SUBSIDIAIRE	0.641 (0.433)	0.939 (0.326)	
- DOSE*SUBSIDIAIRE	0.247 (0.215)	0.381 (0.309)	
- AMENDEM*DOSE*SUBSID	0.595 (0.440)	0.918 (0.408)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 03/10/84
parametre: H 59
unite : cm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	91.170	85.860	76.470	72.890	67.610	71.810	55.890	63.640	69.860	59.420	62.360	72.290
X 12k	73.720	62.110	62.330	61.360	70.940	63.110	79.720	71.440	50.640	64.640	52.080	59.000
X 13k	68.360	62.970	63.330	72.310	57.500	63.750	53.110	59.500	59.830	47.530	52.390	53.920
X 21k	76.000	76.640	74.110	74.680	82.560	83.310	60.470	58.000	67.720	67.920	88.970	78.580
X 22k	66.560	62.720	57.890	64.210	64.500	63.310	65.000	76.920	79.190	72.500	69.690	75.640
X 23k	60.140	70.390	66.720	56.530	73.390	65.530	65.650	64.330	71.530	46.720	51.560	52.760

2 - MOYENNES ET ECARTS RELATIFS

X ... = 66.489

X 1.. = 64.857 (-2.45) X 2..= 68.121 (2.45)

X .1. = 72.426 (8.93) X .2. = 66.218 (-0.41) X .3. = 60.823 (-8.52)

X ..1 = 66.916 (0.64) X ..2 = 66.062 (-0.64)

X 11. = 70.773 (6.44) X 12. = 64.258 (-3.36) X 13. = 59.542 (-10.45)
X 21. = 74.080 (11.42) X 22. = 68.178 (2.54) X 23. = 62.104 (-6.59)

X 1.1 = 64.851 (-2.46) X 1.2 = 64.864 (-2.44) X 2.1 = 68.981 (3.75) X 2.2 = 67.261 (1.16)

X .11 = 72.766 (9.44) X .12 = 72.087 (8.42)
X .21 = 66.022 (-0.70) X .22 = 66.413 (-0.11)
X .31 = 61.959 (-6.81) X .32 = 59.687 (-10.23)

X 111 = 70.560 (6.12) X 121 = 64.905 (-2.38) X 131 = 59.087 (-11.13)
X 112 = 70.985 (6.76) X 122 = 63.610 (-4.33) X 132 = 59.997 (-9.76)
X 211 = 74.972 (12.76) X 221 = 67.138 (0.98) X 231 = 64.832 (-2.49)
X 212 = 73.188 (10.08) X 222 = 69.217 (4.10) X 232 = 59.377 (-10.70)

X 11 = 71.387 (7.37) X 12 = 66.903 (0.62) X 13 = 68.943 (3.69)
X 14 = 64.473 (-3.03) X 15 = 63.125 (-5.06) X 16 = 64.103 (-3.59)

X a1 = 76.833 (15.56) X a2 = 67.439 (1.43) X a3 = 67.226 (1.11)
X a4 = 63.056 (-5.16) X a5 = 61.142 (-8.04) X a6 = 63.237 (-4.89)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.15818E+02 (16.2)	6.39194E+01 (12.0)	4.91456E+01 (10.5)
VR2 (cv2%)	3.56210E+01 (9.0)	4.84087E+01 (10.5)	
VR3 (cv3%)	3.73258E+01 (9.2)	3.47682E+01 (8.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.63881E+00	1.98587E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.655 (0.792)	2.999 (0.908)	3.900 (0.941)
- DOSE	6.986 (0.996)	12.659 (1.000)	16.464 (1.000)
- AMENDEMENT*DOSE	0.024 (0.023)	0.043 (0.042)	0.056 (0.055)
- SUBSIDIAIRE	0.368 (0.426)	0.271 (0.372)	
- AMENDEMENT*SUBSIDIAIRE	0.362 (0.441)	0.389 (0.455)	
- DOSE*SUBSIDIAIRE	0.289 (0.245)	0.310 (0.260)	
- AMENDEM*DOSE*SUBSID	0.960 (0.399)	1.030 (0.627)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.796 (0.903)	4.011 (0.952)	
- DOSE	11.803 (1.000)	16.930 (1.000)	
- AMENDEMENT*DOSE	0.040 (0.039)	0.058 (0.056)	
- SUBSIDIAIRE	0.191 (0.332)	0.274 (0.391)	
- AMENDEMENT*SUBSIDIAIRE	0.197 (0.337)	0.283 (0.396)	
- DOSE*SUBSIDIAIRE	0.157 (0.145)	0.226 (0.199)	
- AMENDEM*DOSE*SUBSID	0.522 (0.398)	0.749 (0.482)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 10/10/84
parametre: H 66
unite : cm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	135.310	133.940	118.440	114.080	107.560	114.640	95.190	107.320	110.830	96.060	101.250	115.91
X 12k	117.330	104.970	105.720	103.860	112.310	101.280	127.690	116.640	83.530	103.220	88.250	100.85
X 13k	104.310	100.500	97.170	110.330	95.250	102.360	92.920	100.060	98.940	79.940	88.790	90.36
X 21k	118.110	121.310	117.280	118.910	143.280	129.830	101.060	101.310	104.500	105.860	129.360	121.61
X 22k	108.710	104.500	95.500	105.440	104.580	103.190	111.750	121.780	119.580	99.250	113.610	122.56
X 23k	103.120	113.420	109.330	97.580	118.780	93.780	115.470	107.920	112.210	80.440	87.170	94.03

2 - MOYENNES ET ECARTS RELATIFS

X ... = 107.406

X 1.. = 104.920 (-2.31) X 2..= 109.892 (2.31)

X .1. = 115.123 (7.18) X .2. = 107.337 (-0.06) X .3. = 99.758 (-7.12)

X ..1 = 108.172 (0.71) X ..2 = 106.640 (-0.71)

X 11. = 112.544 (4.78) X 12. = 105.471 (-1.80) X 13. = 96.744 (-9.93)
X 21. = 117.702 (9.59) X 22. = 109.204 (1.67) X 23. = 102.771 (-4.32)

X 1.1 = 104.488 (-2.72) X 1.2 = 105.351 (-1.91) X 2.1 = 111.856 (4.14) X 2.2 = 107.929 (0.49)

X .11 = 115.181 (7.24) X .12 = 115.065 (7.13)
X .21 = 107.380 (-0.02) X .22 = 107.295 (-0.10)
X .31 = 101.955 (-5.08) X .32 = 97.560 (-9.17)

X 111 = 111.430 (3.75) X 121 = 105.805 (-1.49) X 131 = 96.230 (-10.41)
X 112 = 113.658 (5.82) X 122 = 105.137 (-2.11) X 132 = 97.258 (-9.45)
X 211 = 118.932 (10.73) X 221 = 108.955 (1.44) X 231 = 107.680 (0.26)

X 111 = 163.023 (4.11) X 121 = 154.945 (-1.05) X 131 = 140.660 (-10.17)
X 112 = 162.817 (3.98) X 122 = 152.418 (-2.66) X 132 = 144.253 (-7.87)
X 211 = 168.037 (7.32) X 221 = 157.082 (0.32) X 231 = 157.397 (0.52)
X 212 = 167.155 (6.75) X 222 = 164.295 (4.93) X 232 = 146.905 (-6.18)

X 11 = 163.169 (4.21) X 12 = 157.642 (0.68) X 13 = 157.958 (0.88)
X 14 = 158.057 (0.94) X 15 = 148.257 (-5.32) X 16 = 154.409 (-1.39)

X m1 = 171.834 (9.74) X m2 = 158.567 (1.27) X m3 = 158.696 (1.35)
X m4 = 151.557 (-3.21) X m5 = 149.091 (-4.78) X m6 = 149.747 (-4.36)

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.77215E+02 (10.6)	1.58890E+02 (8.1)	1.25051E+02 (7.1)
VR2 (cv2%)	1.63793E+02 (8.2)	1.30057E+02 (7.3)	
VR3 (cv3%)	1.12186E+02 (6.8)	1.18933E+02 (7.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.38206E+00	4.54541E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.297 (0.922)	5.752 (0.977)	7.308 (0.987)
- DOSE	7.001 (0.996)	12.214 (1.000)	15.519 (1.000)
- AMENDEMENT*DOSE	0.136 (0.127)	0.238 (0.208)	0.303 (0.254)
- SUBSIDIAIRE	0.033 (0.144)	0.042 (0.161)	
- AMENDEMENT*SUBSIDIAIRE	0.112 (0.261)	0.106 (0.254)	
- DOSE*SUBSIDIAIRE	0.449 (0.351)	0.423 (0.335)	
- AMENDEM*DOSE*SUBSID	1.907 (0.832)	1.799 (0.815)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.984 (0.972)	6.719 (0.988)	
- DOSE*SUBSIDIAIRE	0.321 (0.268)	0.355 (0.292)	
- AMENDEM*DOSE*SUBSID	0.471 (0.367)	0.521 (0.398)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	192.030	185.410	172.220	164.580	161.780	155.940	140.560	159.310	164.720	142.690	146.830	168.470
X 12k	168.830	148.740	155.810	151.440	162.110	147.060	181.360	168.110	127.170	148.220	134.390	150.940
X 13k	147.170	143.470	143.610	166.220	139.330	148.780	132.390	145.030	148.220	123.580	133.240	138.440
X 21k	167.750	176.610	167.720	168.710	178.220	133.610	149.970	148.060	150.670	150.220	193.890	175.720
X 22k	158.470	157.060	139.580	157.590	151.060	148.890	163.330	181.290	171.610	165.330	158.440	175.610
X 23k	150.910	161.580	158.610	145.610	170.610	148.110	167.750	159.030	162.940	123.720	133.560	143.380

2 - MOYENNES ET ECARTS RELATIFS

X ... = 156.582

X 1.. = 153.019 (-2.28) X 2..= 160.145 (2.28)

X .1. = 165.258 (5.54) X .2. = 157.185 (0.38) X .3. = 147.304 (-5.93)

X ..1 = 156.857 (0.18) X ..2 = 156.307 (-0.18)

X 11. = 162.920 (4.05) X 12. = 153.682 (-1.85) X 13. = 142.457 (-9.02)
X 21. = 167.596 (7.03) X 22. = 160.688 (2.62) X 23. = 152.151 (-2.83)

X 1.1 = 152.876 (-2.37) X 1.2 = 153.163 (-2.18) X 2.1 = 160.838 (2.72) X 2.2 = 159.452 (1.83)

X .11 = 165.530 (5.71) X .12 = 164.986 (5.37)
X .21 = 156.013 (-0.36) X .22 = 158.357 (1.13)
X .31 = 149.028 (-4.82) X .32 = 145.579 (-7.03)

X 212 = 116.472 (8.44) X 222 = 109.453 (1.91) X 232 = 97.862 (-8.89)

X 11 = 113.794 (5.95) X 12 = 107.803 (0.37) X 13 = 110.570 (2.95)
X 14 = 108.259 (0.79) X 15 = 99.530 (-7.33) X 16 = 104.479 (-2.72)

X m1 = 116.953 (8.89) X m2 = 110.133 (2.54) X m3 = 109.927 (2.35)
X m4 = 103.589 (-3.55) X m5 = 101.206 (-5.77) X m6 = 102.627 (-4.45)

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.73927E+02 (12.3)	1.45849E+02 (11.2)	1.08929E+02 (9.7)
VR2 (cv2%)	1.10578E+02 (9.8)	7.00889E+01 (7.8)	
VR3 (cv3%)	6.88073E+01 (7.7)	7.69051E+01 (8.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.57085E+00	2.54467E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.559 (0.881)	3.052 (0.911)	4.086 (0.946)
- DOSE	8.145 (0.998)	9.713 (0.999)	13.005 (1.000)
- AMENDEMENT*DOSE	0.046 (0.045)	0.055 (0.054)	0.074 (0.071)
- SUBSIDIAIRE	0.382 (0.432)	0.603 (0.477)	
- AMENDEMENT*SUBSIDIAIRE	1.500 (0.770)	1.342 (0.743)	
- DOSE*SUBSIDIAIRE	0.536 (0.403)	0.480 (0.370)	
- AMENDEM*DOSE*SUBSID	0.787 (0.470)	0.704 (0.492)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.869 (0.948)	4.288 (0.959)	
- DOSE	12.315 (1.000)	13.648 (1.000)	
- AMENDEMENT*DOSE	0.070 (0.068)	0.077 (0.075)	
- SUBSIDIAIRE	0.367 (0.446)	0.407 (0.467)	
- AMENDEMENT*SUBSIDIAIRE	0.897 (0.350)	0.994 (0.324)	
- DOSE	10.584 (1.000)	14.267 (1.000)	
- AMENDEMENT*DOSE	0.206 (0.184)	0.278 (0.238)	
- SUBSIDIAIRE	0.030 (0.142)	0.040 (0.164)	
- AMENDEMENT*SUBSIDIAIRE	0.069 (0.210)	0.093 (0.240)	
- DOSE*SUBSIDIAIRE	0.274 (0.235)	0.370 (0.302)	
- AMENDEM*DOSE*SUBSID	1.167 (0.680)	1.573 (0.784)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/09/84
parametre: V 38-45
unite : ca/j

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.549	1.429	1.293	1.301	0.931	1.190	0.931	1.063	1.300	1.049	0.704	1.516
X 12k	1.326	1.104	0.993	1.091	1.040	0.913	1.190	1.254	0.956	1.191	0.699	0.607
X 13k	1.210	1.179	1.191	1.127	0.924	1.111	0.797	1.047	0.953	0.866	0.739	0.576
X 21k	1.227	1.293	1.254	1.479	1.210	1.279	0.993	1.107	1.297	1.170	1.583	0.996
X 22k	1.159	1.131	1.013	1.143	1.076	1.083	1.094	1.297	1.253	1.249	1.357	1.299
X 23k	1.151	1.319	1.267	0.953	0.953	0.929	1.100	1.051	1.174	0.956	0.384	0.769

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.109

X 1.. = 1.062 (-4.19) X 2..= 1.155 (4.19)

X .1. = 1.210 (9.15) X .2. = 1.105 (-0.34) X .3. = 1.011 (-8.80)

X ..1 = 1.102 (-0.60) X ..2 = 1.115 (0.60)

X 11. = 1.180 (6.40) X 12. = 1.030 (-7.07) X 13. = 0.977 (-11.91)
X 21. = 1.241 (11.90) X 22. = 1.179 (6.38) X 23. = 1.045 (-5.70)

X 1.1 = 1.035 (-6.67) X 1.2 = 1.090 (-1.71) X 2.1 = 1.169 (5.46) X 2.2 = 1.141 (2.92)

X .11 = 1.181 (6.53) X .12 = 1.239 (11.77)
X .21 = 1.096 (-1.13) X .22 = 1.114 (0.44)
X .31 = 1.029 (-7.22) X .32 = 0.993 (-10.39)

X 111 = 1.101 (-0.65) X 121 = 1.034 (-6.75) X 131 = 0.969 (-12.63)
X 112 = 1.258 (13.45) X 122 = 1.027 (-7.38) X 132 = 0.984 (-11.22)
X 211 = 1.261 (13.71) X 221 = 1.159 (4.50) X 231 = 1.089 (-1.84)
X 212 = 1.220 (10.08) X 222 = 1.200 (8.26) X 232 = 1.003 (-9.57)

X 11 = 1.256 (13.31) X 12 = 1.175 (6.02) X 13 = 1.053 (-5.00)
X 14 = 1.077 (-2.85) X 15 = 1.096 (-1.14) X 16 = 0.994 (-10.35)

X m1 = 1.225 (10.50) X m2 = 1.117 (0.76) X m3 = 1.159 (4.55)
X m4 = 1.008 (-9.07) X m5 = 1.044 (-5.86) X m6 = 1.099 (-0.88)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.28424E-02 (18.7)	4.91014E-02 (20.0)	3.51847E-02 (16.9)
VR2 (cv2%)	1.36539E-02 (10.5)	1.78178E-02 (12.0)	
VR3 (cv3%)	2.15160E-02 (13.2)	2.06852E-02 (13.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.70438E+00	4.69359E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.629 (0.935)	3.166 (0.916)	4.419 (0.954)
- DOSE	5.555 (0.990)	4.847 (0.984)	6.764 (0.995)
- AMENDEMENT*DOSE	0.333 (0.276)	0.290 (0.246)	0.405 (0.323)
- SUBSIDIAIRE	0.237 (0.351)	0.182 (0.312)	
- AMENDEMENT*SUBSIDIAIRE	1.441 (0.760)	1.499 (0.770)	
- DOSE*SUBSIDIAIRE	0.611 (0.445)	0.635 (0.457)	
- AMENDEM*DOSE*SUBSID	1.065 (0.639)	1.109 (0.653)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	5.313 (0.976)	4.895 (0.970)	
- DOSE	8.133 (0.999)	7.492 (0.998)	
- AMENDEMENT*DOSE	0.487 (0.377)	0.449 (0.354)	
- SUBSIDIAIRE	0.111 (0.260)	0.102 (0.251)	
- AMENDEMENT*SUBSIDIAIRE	1.060 (0.691)	0.976 (0.329)	
- DOSE*SUBSIDIAIRE	0.449 (0.354)	0.414 (0.331)	
- AMENDEM*DOSE*SUBSID	0.783 (0.466)	0.721 (0.495)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 26.09.94
parametre: V 45-52
unite : cm/j

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	4.503	4.223	3.580	2.814	2.790	3.134	2.406	2.813	3.116	2.444	2.723	3.036
X 12k	3.386	2.777	2.511	2.679	2.817	2.583	3.719	2.920	2.011	2.694	1.991	2.460
X 13k	2.433	2.564	2.627	3.127	2.384	2.456	2.103	2.489	2.556	1.813	2.281	2.404
X 21k	3.326	2.139	3.270	3.311	3.571	3.746	2.460	2.447	2.889	2.759	4.154	3.607
X 22k	3.040	3.079	2.484	2.670	2.540	2.531	3.009	3.227	3.589	3.129	2.949	3.380
X 23k	2.543	3.031	2.840	2.297	3.194	2.666	2.846	2.726	3.160	1.797	2.036	2.117

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.832

X 1.. = 2.760 (-2.54) X 2..= 2.904 (2.54)

X .1. = 3.136 (10.73) X .2. = 2.840 (0.27) X .3. = 2.520 (-11.00)

X ..1 = 2.884 (1.83) X ..2 = 2.780 (-1.83)

X 11. = 3.132 (10.59) X 12. = 2.712 (-4.22) X 13. = 2.436 (-13.97)
X 21. = 3.140 (10.87) X 22. = 2.967 (4.77) X 23. = 2.604 (-8.04)

X 1.1 = 2.774 (-2.04) X 1.2 = 2.746 (-3.03) X 2.1 = 2.993 (5.69) X 2.2 = 2.814 (-0.62)

X .11 = 3.232 (14.13) X .12 = 3.039 (7.32)
X .21 = 2.835 (0.12) X .22 = 2.844 (0.43)
X .31 = 2.584 (-8.77) X .32 = 2.457 (-13.23)

X 111 = 3.186 (12.51) X 121 = 2.739 (-3.27) X 131 = 2.397 (-15.35)
X 112 = 3.077 (8.66) X 122 = 2.685 (-5.17) X 132 = 2.475 (-12.59)
X 211 = 3.278 (15.76) X 221 = 2.932 (3.52) X 231 = 2.770 (-2.20)
X 212 = 3.001 (5.98) X 222 = 3.003 (6.02) X 232 = 2.439 (-13.88)

X 11 = 3.087 (9.00) X 12 = 2.849 (0.61) X 13 = 2.868 (1.26)
X 14 = 2.764 (-2.42) X 15 = 2.663 (-5.97) X 16 = 2.762 (-2.49)

X m1 = 3.455 (21.99) X m2 = 2.909 (2.73) X m3 = 2.911 (2.80)
X m4 = 2.523 (-10.91) X m5 = 2.597 (-8.29) X m6 = 2.596 (-8.33)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
vR1 (cv1%)	4.13668E-01 (22.7)	1.72933E-01 (14.7)	1.55305E-01 (13.8)
vR2 (cv2%)	1.30535E-01 (12.8)	1.19634E-01 (12.2)	
vR3 (cv3%)	1.32422E-01 (12.8)	1.34662E-01 (13.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.64975E+00	4.48667E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.897 (0.355)	2.147 (0.848)	2.422 (0.868)
- DOSE	5.496 (0.990)	13.147 (1.000)	14.330 (1.000)
- AMENDEMENT*DOSE	0.227 (0.199)	0.543 (0.407)	0.613 (0.444)
- SUBSIDIAIRE	1.475 (0.721)	1.613 (0.740)	
- AMENDEMENT*SUBSIDIAIRE	0.772 (0.392)	0.759 (0.396)	
- DOSE*SUBSIDIAIRE	0.477 (0.369)	0.469 (0.364)	
- AMENDEM*DOSE*SUBSID	0.809 (0.460)	0.795 (0.466)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.517 (0.778)	2.500 (0.884)	
- DOSE	9.289 (0.999)	15.313 (1.000)	
- AMENDEMENT*DOSE	0.384 (0.311)	0.633 (0.460)	
- SUBSIDIAIRE	0.788 (0.383)	1.300 (0.741)	
- AMENDEMENT*SUBSIDIAIRE	0.418 (0.472)	0.688 (0.416)	
- DOSE*SUBSIDIAIRE	0.258 (0.223)	0.426 (0.339)	
- AMENDEM*DOSE*SUBSID	0.438 (0.346)	0.721 (0.495)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 3 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 03/10/84
parametre: V 52-59
unite : cm/j

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	4.533	4.119	3.971	4.337	4.020	3.946	3.016	3.136	3.793	3.286	3.281	4.101
X 12k	3.737	3.143	3.476	3.051	4.429	3.730	4.159	3.940	2.651	3.433	2.984	3.373
X 13k	4.196	3.416	3.467	3.929	3.111	3.754	2.953	3.159	3.186	2.504	2.643	2.667
X 21k	3.956	5.294	3.944	3.950	4.380	4.453	3.170	2.973	3.304	3.694	4.484	4.373
X 22k	3.299	2.873	2.976	3.336	3.710	3.589	3.230	4.159	4.269	3.933	3.936	4.151
X 23k	3.040	3.893	3.611	2.866	4.133	3.759	3.477	3.460	3.853	2.464	2.759	2.929

2 - MOYENNES ET ECARTS RELATIFS

X ... = 3.594

X 1.. = 3.517 (-2.13) X 2..= 3.670 (2.13)

X .1. = 3.913 (8.89) X..2. = 3.565 (-0.80) X .3. = 3.303 (-8.09)

X ..1 = 3.599 (0.15) X ..2 = 3.588 (-0.15)

X 11. = 3.795 (5.60) X 12. = 3.508 (-2.38) X 13. = 3.248 (-9.62)
X 21. = 4.031 (12.18) X 22. = 3.622 (0.78) X 23. = 3.358 (-6.56)

X 1.1 = 3.533 (-1.70) X 1.2 = 3.501 (-2.57) X 2.1 = 3.666 (2.00) X 2.2 = 3.675 (2.26)

X .11 = 3.854 (7.26) X .12 = 3.972 (10.52)
X .21 = 3.570 (-0.64) X .22 = 3.559 (-0.96)
X .31 = 3.372 (-6.16) X .32 = 3.233 (-10.03)

X 111 = 3.769 (4.88) X 121 = 3.571 (-0.62) X 131 = 3.258 (-9.35)
X 112 = 3.821 (6.32) X 122 = 3.445 (-4.13) X 132 = 3.238 (-9.89)
X 211 = 3.940 (9.63) X 221 = 3.570 (-0.66) X 231 = 3.487 (-2.96)
X 212 = 4.123 (14.73) X 222 = 3.673 (2.22) X 232 = 3.228 (-10.16)

X 11 = 3.791 (5.48) X 12 = 3.576 (-0.48) X 13 = 3.938 (9.58)
X 14 = 3.402 (-5.32) X 15 = 3.381 (-5.92) X 16 = 3.473 (-3.34)

X m1 = 4.095 (13.97) X m2 = 3.588 (-0.15) X m3 = 3.621 (0.77)
X m4 = 3.548 (-1.28) X m5 = 3.217 (-10.48) X m6 = 3.492 (-2.82)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.08847E-01 (17.8)	3.35306E-01 (16.1)	2.66824E-01 (14.4)
VR2 (cv2%)	1.22011E-01 (9.7)	2.37099E-01 (13.5)	
VR3 (cv3%)	1.89235E-01 (12.1)	1.66218E-01 (11.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.42593E+00	2.63341E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.034 (0.680)	1.261 (0.728)	1.584 (0.779)
- DOSE	5.502 (0.990)	6.709 (0.995)	8.431 (0.998)
- AMENDEMENT*DOSE	0.076 (0.074)	0.093 (0.089)	0.117 (0.110)
- SUBSIDIAIRE	0.018 (0.106)	0.009 (0.076)	
- AMENDEMENT*SUBSIDIAIRE	0.039 (0.161)	0.045 (0.172)	
- DOSE*SUBSIDIAIRE	0.522 (0.395)	0.594 (0.435)	
- AMENDEM*DOSE*SUBSID	0.485 (0.373)	0.552 (0.412)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.564 (0.785)	1.755 (0.812)	
- DOSE	8.321 (0.999)	9.337 (0.999)	
- AMENDEMENT*DOSE	0.115 (0.109)	0.129 (0.121)	
- SUBSIDIAIRE	0.008 (0.074)	0.009 (0.079)	
- AMENDEMENT*SUBSIDIAIRE	0.027 (0.137)	0.031 (0.144)	
- DOSE*SUBSIDIAIRE	0.365 (0.299)	0.410 (0.328)	
- AMENDEM*DOSE*SUBSID	0.339 (0.281)	0.381 (0.309)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 10/10/84
parametre: V 59-66
unite : ca/j

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.306	6.869	5.996	5.884	5.707	6.119	5.614	6.240	5.853	5.234	5.556	6.231
X 12k	6.230	6.123	6.199	6.071	5.910	5.453	6.853	6.457	4.699	5.511	5.167	5.979
X 13k	5.136	5.361	4.834	5.431	5.393	5.816	5.687	5.794	5.587	4.630	5.200	5.206
X 21k	6.016	6.381	6.167	6.319	8.674	6.646	5.799	6.187	5.254	5.420	5.770	6.147
X 22k	6.021	5.969	5.373	5.890	5.726	5.897	6.679	6.409	5.770	3.821	6.274	6.703
X 23k	6.140	6.147	6.087	5.864	6.484	4.036	7.117	6.227	5.811	4.817	5.087	5.896

2 - MOYENNES ET ECARTS RELATIFS

X ... = 5.845

X 1.. = 5.723 (-2.09) X 2..= 5.967 (2.09)

X .1. = 6.100 (4.35) X .2. = 5.874 (0.50) X .3. = 5.562 (-4.85)

X ..1 = 5.894 (0.83) X ..2 = 5.797 (-0.83)

X 11. = 5.967 (2.09) X 12. = 5.888 (0.72) X 13. = 5.315 (-9.08)
X 21. = 6.232 (6.61) X 22. = 5.861 (0.27) X 23. = 5.810 (-0.61)

X 1.1 = 5.663 (-3.13) X 1.2 = 5.784 (-1.05) X 2.1 = 6.125 (4.79) X 2.2 = 5.810 (-0.61)

X .11 = 6.059 (3.66) X .12 = 6.140 (5.04)
X .21 = 5.908 (1.08) X .22 = 5.840 (-0.09)
X .31 = 5.714 (-2.25) X .32 = 5.410 (-7.44)

X 111 = 5.839 (-0.12) X 121 = 5.843 (-0.04) X 131 = 5.306 (-9.22)
X 112 = 6.096 (4.29) X 122 = 5.932 (1.49) X 132 = 5.323 (-8.93)
X 211 = 6.280 (7.44) X 221 = 5.974 (2.20) X 231 = 6.121 (4.72)
X 212 = 6.183 (5.78) X 222 = 5.748 (-1.66) X 232 = 5.498 (-5.94)

X 11 = 6.058 (3.64) X 12 = 5.843 (-0.04) X 13 = 5.947 (1.73)
X 14 = 6.255 (7.01) X 15 = 5.201 (-11.03) X 16 = 5.768 (-1.32)

X m1 = 5.732 (-1.95) X m2 = 6.099 (4.34) X m3 = 6.100 (4.36)
X m4 = 5.790 (-0.94) X m5 = 5.723 (-2.09) X m6 = 5.627 (-3.73)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.06175E-01 (10.9)	6.16043E-01 (13.4)	3.82974E-01 (10.6)
VR2 (cv2%)	6.93442E-01 (14.2)	2.44755E-01 (8.5)	
VR3 (cv3%)	2.42263E-01 (8.4)	3.32000E-01 (9.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.08239E+00	2.76400E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.642 (0.887)	1.742 (0.804)	2.802 (0.894)
- DOSE	4.304 (0.976)	2.838 (0.924)	4.565 (0.980)
- AMENDEMENT*DOSE	1.009 (0.619)	0.665 (0.473)	1.070 (0.637)
- SUBSIDIAIRE	0.244 (0.356)	0.691 (0.448)	
- AMENDEMENT*SUBSIDIAIRE	3.541 (0.932)	2.584 (0.883)	
- DOSE*SUBSIDIAIRE	0.927 (0.411)	0.676 (0.478)	
- AMENDEM*DOSE*SUBSID	0.195 (0.174)	0.142 (0.132)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.040 (0.916)	2.456 (0.881)	
- DOSE	4.953 (0.989)	4.001 (0.976)	
- AMENDEMENT*DOSE	1.161 (0.678)	0.938 (0.400)	
- SUBSIDIAIRE	0.479 (0.499)	0.387 (0.456)	
- AMENDEMENT*SUBSIDIAIRE	2.430 (0.879)	1.963 (0.836)	
- DOSE*SUBSIDIAIRE	0.636 (0.462)	0.514 (0.393)	
- AMENDEM*DOSE*SUBSID	0.134 (0.125)	0.108 (0.103)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 16/10/84
parametre: V 66-72
unite : cm/j

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	9.453	8.578	8.963	8.417	9.037	6.883	7.562	8.748	8.982	7.772	7.597	8.760
X 12k	8.583	7.295	8.348	7.930	8.300	7.630	8.945	8.578	7.273	7.500	7.690	8.348
X 13k	7.143	7.162	7.740	9.315	7.347	7.737	6.578	7.495	8.213	7.273	7.408	8.013
X 21k	8.273	9.217	8.407	8.300	5.823	8.963	8.152	7.792	7.695	7.393	10.755	9.018
X 22k	8.293	8.760	7.347	8.692	7.747	7.617	8.597	9.918	8.672	11.013	7.472	8.842
X 23k	7.965	8.027	8.213	8.005	8.638	9.055	8.713	8.518	8.455	7.213	7.732	8.225

2 - MOYENNES ET ECARTS RELATIFS

X ... = 8.196

X 1.. = 8.017 (-2.19) X 2..= 8.375 (2.19)

X .1. = 8.356 (1.95) X .2. = 8.308 (1.36) X .3. = 7.924 (-3.31)

X ..1 = 8.114 (-1.00) X ..2 = 8.278 (1.00)

X 11. = 8.396 (2.44) X 12. = 8.035 (-1.96) X 13. = 7.619 (-7.04)
X 21. = 8.316 (1.46) X 22. = 8.581 (4.69) X 23. = 8.230 (0.41)

X 1.1 = 8.065 (-1.60) X 1.2 = 7.969 (-2.77) X 2.1 = 8.164 (-0.39) X 2.2 = 8.587 (4.77)

X .11 = 8.392 (2.39) X .12 = 8.320 (1.51)
X .21 = 8.106 (-1.10) X .22 = 8.510 (3.83)
X .31 = 7.846 (-4.28) X .32 = 8.003 (-2.35)

X 111 = 8.599 (4.92) X 121 = 8.190 (-0.07) X 131 = 7.405 (-9.65)
X 112 = 8.193 (-0.04) X 122 = 7.880 (-3.85) X 132 = 7.832 (-4.44)
X 211 = 8.184 (-0.14) X 221 = 8.021 (-2.13) X 231 = 8.286 (1.10)
X 212 = 8.447 (3.06) X 222 = 9.140 (11.52) X 232 = 8.174 (-0.27)

X 11 = 8.229 (0.40) X 12 = 8.306 (1.35) X 13 = 7.898 (-3.64)
X 14 = 8.300 (1.27) X 15 = 8.121 (-0.91) X 16 = 8.322 (1.53)

X m1 = 9.147 (11.60) X m2 = 8.072 (-1.51) X m3 = 8.128 (-0.83)
X m4 = 7.995 (-2.46) X m5 = 7.981 (-2.63) X m6 = 7.853 (-4.18)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.59206E-01 (11.3)	3.82146E-01 (7.5)	3.97166E-01 (7.7)
VR2 (cv2%)	2.06604E-01 (5.5)	5.74253E-01 (9.2)	
VR3 (cv3%)	6.40255E-01 (9.8)	5.66725E-01 (9.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.97743E+00	8.73393E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.698 (0.890)	6.065 (0.980)	5.836 (0.976)
- DOSE	1.562 (0.772)	3.512 (0.956)	3.380 (0.951)
- AMENDEMENT*DOSE	1.017 (0.622)	2.288 (0.879)	2.201 (0.865)
- SUBSIDIAIRE	2.333 (0.814)	0.840 (0.404)	
- AMENDEMENT*SUBSIDIAIRE	1.896 (0.822)	2.142 (0.848)	
- DOSE*SUBSIDIAIRE	0.531 (0.401)	0.600 (0.439)	
- AMENDEM*DOSE*SUBSID	2.309 (0.882)	2.609 (0.908)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.386 (0.932)	4.695 (0.967)	
- DOSE	1.961 (0.851)	2.719 (0.926)	
- AMENDEMENT*DOSE	1.277 (0.713)	1.771 (0.821)	
- SUBSIDIAIRE	0.704 (0.410)	0.977 (0.329)	
- AMENDEMENT*SUBSIDIAIRE	1.773 (0.814)	2.459 (0.881)	
- DOSE*SUBSIDIAIRE	0.497 (0.383)	0.689 (0.489)	
- AMENDEM*DOSE*SUBSID	2.160 (0.876)	2.995 (0.942)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: NEPR
unite : nbre epis/plt

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.000	1.000	0.889	0.944	1.000	0.944	1.000	1.000	0.889	0.944	0.944	0.944
X 12k	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.944	1.000	1.000	1.056
X 13k	1.000	1.000	0.944	0.944	1.000	1.000	1.000	1.000	1.000	0.944	1.000	0.944
X 21k	1.000	1.000	0.833	0.889	1.056	1.000	1.000	0.944	0.944	0.889	1.000	0.944
X 22k	1.000	1.000	0.944	0.889	1.000	1.000	1.000	1.000	0.944	0.944	1.000	1.000
X 23k	1.000	1.000	0.889	1.000	1.056	1.000	1.000	1.000	1.000	1.000	1.056	1.056

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.980

X 1.. = 0.980 (-0.00) X 2..= 0.980 (-0.00)

X .1. = 0.958 (-2.20) X .2. = 0.988 (0.87) X .3. = 0.993 (1.34)

X ..1 = 0.981 (0.16) X ..2 = 0.978 (-0.16)

X 11. = 0.958 (-2.20) X 12. = 1.000 (2.05) X 13. = 0.981 (0.16)
X 21. = 0.958 (-2.20) X 22. = 0.977 (-0.31) X 23. = 1.005 (2.52)

X 1.1 = 0.978 (-0.16) X 1.2 = 0.981 (0.16) X 2.1 = 0.985 (0.47) X 2.2 = 0.975 (-0.47)

X .11 = 0.963 (-1.73) X .12 = 0.954 (-2.68)
X .21 = 0.986 (0.63) X .22 = 0.991 (1.10)
X .31 = 0.995 (1.57) X .32 = 0.991 (1.10)

X 111 = 0.954 (-2.68) X 121 = 0.991 (1.10) X 131 = 0.991 (1.10)
X 112 = 0.963 (-1.73) X 122 = 1.009 (2.99) X 132 = 0.972 (-0.79)
X 211 = 0.972 (-0.79) X 221 = 0.981 (0.16) X 231 = 1.000 (2.05)
X 212 = 0.944 (-3.62) X 222 = 0.972 (-0.79) X 232 = 1.009 (2.99)

X 11 = 1.000 (2.05) X 12 = 0.931 (-5.04) X 13 = 1.005 (2.52)
X 14 = 0.995 (1.57) X 15 = 0.954 (-2.68) X 16 = 0.995 (1.57)

X m1 = 0.981 (0.16) X m2 = 0.981 (0.16) X m3 = 0.968 (-1.26)
X m4 = 0.981 (0.16) X m5 = 0.995 (1.57) X m6 = 0.972 (-0.79)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.24143E-03 (3.6)	3.23731E-03 (5.8)	1.27743E-03 (3.6)
VR2 (cv2%)	9.94513E-04 (3.2)	1.30316E-03 (3.7)	
VR3 (cv3%)	7.08447E-04 (2.7)	6.44719E-04 (2.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.70868E+00	1.34611E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.000 (0.005)	0.000 (0.005)	0.000 (0.005)
- DOSE	6.872 (0.996)	2.635 (0.910)	6.678 (0.995)
- AMENDEMENT*DOSE	2.590 (0.907)	0.993 (0.386)	2.517 (0.896)
- SUBSIDIAIRE	0.172 (0.305)	0.132 (0.271)	
- AMENDEMENT*SUBSIDIAIRE	0.971 (0.335)	1.064 (0.687)	
- DOSE*SUBSIDIAIRE	0.425 (0.336)	0.465 (0.362)	
- AMENDEM*DOSE*SUBSID	2.609 (0.908)	2.859 (0.925)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.000 (0.005)	0.000 (0.005)	
- DOSE	8.987 (0.999)	4.881 (0.989)	
- AMENDEMENT*DOSE	3.387 (0.959)	1.840 (0.832)	
- SUBSIDIAIRE	0.181 (0.324)	0.098 (0.246)	
- AMENDEMENT*SUBSIDIAIRE	0.723 (0.404)	0.392 (0.459)	
- DOSE*SUBSIDIAIRE	0.316 (0.265)	0.172 (0.156)	
- AMENDEM*DOSE*SUBSID	1.942 (0.848)	1.055 (0.643)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: PRR
unite : g/pit

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	22.500	21.722	18.278	16.778	20.778	20.333	18.944	23.333	17.778	20.167	21.000	21.278
X 12k	24.556	23.333	24.833	23.889	21.389	22.722	21.278	19.778	16.333	22.333	24.222	21.833
X 13k	21.833	22.556	21.000	19.833	22.389	20.722	20.889	23.667	16.500	18.222	19.333	17.556
X 21k	23.000	22.889	17.722	19.167	19.722	21.056	23.056	20.722	19.556	16.444	21.000	21.222
X 22k	23.167	23.333	20.944	18.667	20.222	21.000	22.611	22.333	20.222	18.056	22.222	21.389
X 23k	22.500	22.833	19.889	23.000	18.778	21.222	21.278	20.889	23.222	19.778	20.056	21.833

2 - MOYENNES ET ECARTS RELATIFS

X ... = 20.957

X 1.. = 20.941 (-0.07) X 2..= 20.972 (0.07)

X .1. = 20.352 (-2.89) X .2. = 21.694 (3.52) X .3. = 20.824 (-0.63)

X ..1 = 20.917 (-0.19) X ..2 = 20.997 (0.19)

X 11. = 20.241 (-3.42) X 12. = 22.208 (5.97) X 13. = 20.375 (-2.78)
X 21. = 20.463 (-2.36) X 22. = 21.181 (1.07) X 23. = 21.273 (1.51)

X 1.1 = 20.769 (-0.90) X 1.2 = 21.114 (0.75) X 2.1 = 21.065 (0.52) X 2.2 = 20.880 (-0.37)

X .11 = 20.278 (-3.24) X .12 = 20.426 (-2.53)
X .21 = 21.833 (4.18) X .22 = 21.556 (2.36)
X .31 = 20.639 (-1.52) X .32 = 21.009 (0.25)

X 111 = 19.880 (-5.14) X 121 = 22.102 (5.46) X 131 = 20.324 (-3.02)
X 112 = 20.602 (-1.69) X 122 = 22.315 (6.48) X 132 = 20.426 (-2.53)
X 211 = 20.676 (-1.34) X 221 = 21.565 (2.90) X 231 = 20.954 (-0.01)
X 212 = 20.250 (-3.37) X 222 = 20.796 (-0.77) X 232 = 21.593 (3.03)

X 11 = 22.852 (9.04) X 12 = 20.333 (-2.97) X 13 = 20.861 (-0.46)
X 14 = 21.565 (2.90) X 15 = 19.051 (-9.09) X 16 = 21.079 (0.58)

X m1 = 20.551 (-1.94) X m2 = 20.139 (-3.90) X m3 = 20.532 (-2.03)
X m4 = 21.546 (2.81) X m5 = 21.542 (2.79) X m6 = 21.431 (2.26)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.35873E+00 (8.7)	6.27624E+00 (12.0)	3.04171E+00 (8.3)
VR2 (cv2%)	5.71653E-01 (3.5)	1.67250E+00 (6.2)	
VR3 (cv3%)	2.80276E+00 (8.0)	2.57460E+00 (7.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.40991E+00	5.67131E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.005 (0.058)	0.003 (0.042)	0.006 (0.061)
- DOSE	3.314 (0.948)	1.774 (0.811)	3.660 (0.961)
- AMENDEMENT*DOSE	1.706 (0.799)	0.913 (0.417)	1.883 (0.823)
- SUBSIDIAIRE	0.218 (0.338)	0.069 (0.203)	
- AMENDEMENT*SUBSIDIAIRE	0.452 (0.486)	0.493 (0.496)	
- DOSE*SUBSIDIAIRE	0.232 (0.203)	0.253 (0.219)	
- AMENDEM*DOSE*SUBSID	0.461 (0.359)	0.502 (0.384)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.006 (0.064)	0.004 (0.054)	
- DOSE	3.979 (0.976)	2.809 (0.932)	
- AMENDEMENT*DOSE	2.047 (0.862)	1.445 (0.756)	
- SUBSIDIAIRE	0.041 (0.166)	0.029 (0.141)	
- AMENDEMENT*SUBSIDIAIRE	0.453 (0.489)	0.320 (0.419)	
- DOSE*SUBSIDIAIRE	0.233 (0.204)	0.164 (0.150)	
- AMENDEM*DOSE*SUBSID	0.462 (0.362)	0.326 (0.272)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: PGR
unite : g/vlt

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	118.722	122.667	98.056	82.611	102.333	92.222	110.889	114.167	78.500	96.111	94.889	83.300
X 12k	129.222	121.667	136.389	116.000	118.778	108.556	107.333	97.556	95.722	115.389	125.056	121.111
X 13k	114.333	127.389	121.944	116.833	132.278	117.611	123.333	122.444	115.500	109.000	114.722	106.556
X 21k	117.222	104.722	83.833	106.167	108.056	105.833	121.500	113.556	94.833	89.389	103.444	121.444
X 22k	136.389	138.111	117.222	100.500	116.833	115.722	131.667	114.389	109.389	117.000	114.778	121.278
X 23k	125.167	126.722	110.667	137.056	123.444	122.556	131.556	120.222	119.222	114.722	99.889	123.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 113.144

X 1.. = 111.219 (-1.70) X 2..= 115.069 (1.70)

X .1. = 101.840 (-9.99) X .2. = 117.773 (4.09) X .3. = 119.819 (5.90)

X ..1 = 114.114 (0.86) X ..2 = 112.174 (-0.86)

X 11. = 99.556 (-12.01) X 12. = 116.106 (2.62) X 13. = 117.995 (4.29)
X 21. = 104.125 (-7.97) X 22. = 119.440 (5.56) X 23. = 121.644 (7.51)

X 1.1 = 113.222 (0.07) X 1.2 = 109.216 (-3.47) X 2.1 = 115.006 (1.65) X 2.2 = 115.133 (1.76)

X .11 = 102.690 (-9.24) X .12 = 100.991 (-10.74)
X .21 = 119.898 (5.97) X .22 = 115.648 (2.21)
X .31 = 119.755 (5.84) X .32 = 119.884 (5.96)

X 111 = 100.565 (-11.12) X 121 = 118.750 (4.95) X 131 = 120.352 (6.37)
X 112 = 98.546 (-12.90) X 122 = 113.463 (0.26) X 132 = 115.639 (2.20)
X 211 = 104.815 (-7.36) X 221 = 121.046 (6.98) X 231 = 119.157 (5.31)
X 212 = 103.435 (-8.58) X 222 = 117.833 (4.14) X 232 = 124.130 (9.71)

X 11 = 123.528 (9.18) X 12 = 110.606 (-2.24) X 13 = 114.102 (0.85)
X 14 = 117.384 (3.75) X 15 = 102.898 (-9.06) X 16 = 110.347 (-2.47)

X m1 = 115.611 (2.18) X m2 = 109.949 (-2.82) X m3 = 112.315 (-0.73)
X m4 = 114.065 (0.81) X m5 = 115.745 (2.30) X m6 = 111.131 (-1.74)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.43902E+02 (10.5)	2.48305E+02 (13.9)	1.62306E+02 (11.3)
VR2 (cv2%)	5.75279E+01 (6.3)	5.70659E+01 (6.4)	
VR3 (cv3%)	1.05149E+02 (9.1)	1.06442E+02 (9.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.45274E+00	5.97258E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.854 (0.817)	1.075 (0.689)	1.639 (0.787)
- DOSE	16.158 (1.000)	9.364 (0.999)	14.282 (1.000)
- AMENDEMENT*DOSE	0.017 (0.016)	0.010 (0.009)	0.015 (0.014)
- SUBSIDIAIRE	1.138 (0.664)	1.276 (0.690)	
- AMENDEMENT*SUBSIDIAIRE	0.731 (0.405)	0.722 (0.408)	
- DOSE*SUBSIDIAIRE	0.276 (0.236)	0.273 (0.233)	
- AMENDEM*DOSE*SUBSID	0.337 (0.279)	0.333 (0.276)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.299 (0.869)	1.691 (0.903)	
- DOSE	20.029 (1.000)	14.730 (1.000)	
- AMENDEMENT*DOSE	0.021 (0.020)	0.016 (0.015)	
- SUBSIDIAIRE	0.583 (0.455)	0.429 (0.478)	
- AMENDEMENT*SUBSIDIAIRE	0.662 (0.423)	0.487 (0.495)	
- DOSE*SUBSIDIAIRE	0.250 (0.217)	0.184 (0.166)	
- AMENDEM*DOSE*SUBSID	0.305 (0.258)	0.225 (0.198)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 3 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: PREP
unite : g/pot

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	22.500	21.722	20.562	17.765	20.778	21.529	18.944	23.333	20.000	21.353	22.235	22.529
X 12k	24.556	23.333	24.833	23.889	21.389	22.722	21.278	19.778	17.294	22.333	24.222	20.684
X 13k	21.377	22.556	22.225	21.000	22.389	20.722	20.889	23.667	16.500	19.294	19.333	19.588
X 21k	23.000	22.839	21.267	21.562	19.694	21.056	22.056	21.941	20.706	18.500	21.000	22.471
X 22k	23.167	23.333	22.176	21.000	20.222	21.000	22.611	22.333	21.412	19.118	22.222	21.039
X 23k	22.500	22.833	22.375	23.000	17.789	21.222	21.278	20.889	23.222	19.778	19.000	20.654

2 - MOYENNES ET ECARTS RELATIFS

X ... = 21.379

X 1.. = 21.349 (-0.14) X 2..= 21.408 (0.14)

X .1. = 21.224 (-0.72) X .2. = 21.929 (2.57) X .3. = 20.982 (-1.85)

X ..1 = 21.318 (-0.28) X ..2 = 21.439 (0.28)

X 11. = 21.104 (-1.28) X 12. = 22.193 (3.81) X 13. = 20.751 (-2.94)
X 21. = 21.344 (-0.16) X 22. = 21.665 (1.34) X 23. = 21.214 (-0.77)

X 1.1 = 21.210 (-0.79) X 1.2 = 21.489 (0.52) X 2.1 = 21.427 (0.23) X 2.2 = 21.389 (0.05)

X .11 = 21.061 (-1.49) X .12 = 21.388 (0.04)
X .21 = 22.115 (3.45) X .22 = 21.743 (1.70)
X .31 = 20.779 (-2.81) X .32 = 21.186 (-0.90)

X 111 = 20.837 (-2.57) X 121 = 22.262 (4.13) X 131 = 20.520 (-3.97)
X 112 = 21.372 (-0.03) X 122 = 22.123 (3.48) X 132 = 20.971 (-1.91)
X 211 = 21.285 (-0.44) X 221 = 21.968 (2.76) X 231 = 21.027 (-1.64)
X 212 = 21.403 (0.11) X 222 = 21.362 (-0.08) X 232 = 21.401 (0.11)

X 11 = 22.852 (6.89) X 12 = 21.805 (2.00) X 13 = 20.792 (-2.74)
X 14 = 21.666 (1.35) X 15 = 19.957 (-6.64) X 16 = 21.197 (-0.85)

X a1 = 20.960 (-1.9[illegible]) X a2 = 20.491 (-4.15) X a3 = 21.216 (-0.76)
X a4 = 21.941 (2.63) X a5 = 21.[illegible]35 (1.15) X a6 = 22.036 (3.08)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.88266E+00 (7.9)	4.71819E+00 (9.7)	2.49863E+00 (7.4)
VR2 (cv2%)	1.35772E+00 (5.3)	5.34362E-01 (3.4)	
VR3 (cv3%)	2.45764E+00 (7.0)	2.66201E+00 (7.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.44010E-01	5.88934E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.022 (0.121)	0.014 (0.099)	0.025 (0.129)
- DOSE	2.028 (0.849)	1.345 (0.722)	2.222 (0.880)
- AMENDEMENT*DOSE	0.566 (0.420)	0.376 (0.304)	0.849 (0.462)
- SUBSIDIAIRE	0.168 (0.301)	0.489 (0.460)	
- AMENDEMENT*SUBSIDIAIRE	0.185 (0.326)	0.170 (0.314)	
- DOSE*SUBSIDIAIRE	0.449 (0.351)	0.414 (0.330)	
- AMENDEM*DOSE*SUBSID	0.029 (0.028)	0.027 (0.026)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.025 (0.129)	0.020 (0.117)	
- DOSE	2.295 (0.891)	1.366 (0.836)	
- AMENDEMENT*DOSE	0.641 (0.464)	0.521 (0.397)	
- SUBSIDIAIRE	0.103 (0.252)	0.384 (0.230)	
- AMENDEMENT*SUBSIDIAIRE	0.179 (0.323)	0.146 (0.294)	
- DOSE*SUBSIDIAIRE	0.436 (0.345)	0.355 (0.292)	
- AMENDEM*DOSE*SUBSID	0.028 (0.027)	0.023 (0.022)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 19/12/84
parametre: PGER
unite : g/epi

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1 - DONNEES OBSERVEES

	Bloc 1		Bloc 2		Bloc 3		Bloc 4		Bloc 5		Bloc 6	
X 11k	113.722	122.667	110.312	87.471	102.333	97.647	110.889	114.167	88.313	101.765	100.471	88.412
X 12k	129.222	121.667	136.389	116.000	113.778	108.556	107.333	97.556	101.353	115.889	125.056	114.737
X 13k	114.333	127.389	129.119	123.706	132.278	117.611	123.333	122.444	115.500	113.412	114.722	106.471
X 21k	117.222	104.722	100.600	119.437	102.389	105.833	121.500	120.235	100.412	77.500	103.444	123.586
X 22k	136.389	138.111	124.118	113.062	116.333	115.722	131.667	114.389	115.824	120.882	114.778	121.273
X 23k	125.167	126.722	124.500	137.056	121.834	122.556	131.556	120.222	119.222	114.722	94.652	117.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 115.291

X 1.. = 113.278 (-1.75) X 2.. = 117.304 (1.75)

X .1. = 106.043 (-8.02) X .2. = 119.108 (3.31) X .3. = 120.723 (4.71)

X ..1 = 116.121 (0.72) X ..2 = 114.461 (-0.72)

X 11. = 103.597 (-10.14) X 12. = 116.045 (0.65) X 13. = 120.193 (4.25)
X 21. = 108.489 (-5.90) X 22. = 122.171 (5.97) X 23. = 121.253 (5.17)

X 1.1 = 115.470 (0.15) X 1.2 = 111.087 (-3.65) X 2.1 = 116.773 (1.29) X 2.2 = 117.836 (2.21)

X .11 = 106.382 (-7.73) X .12 = 105.704 (-8.32)
X .21 = 121.478 (5.37) X .22 = 116.737 (1.25)
X .31 = 120.504 (4.52) X .32 = 120.943 (4.90)

X 111 = 105.173 (-8.78) X 121 = 119.638 (3.81) X 131 = 121.547 (5.43)
X 112 = 102.021 (-11.51) X 122 = 112.401 (-2.51) X 132 = 118.839 (3.08)
X 211 = 107.591 (-6.68) X 221 = 123.268 (6.92) X 231 = 119.460 (3.62)
X 212 = 109.386 (-5.12) X 222 = 121.074 (5.02) X 232 = 121.046 (5.73)

X 11 = 123.528 (7.14) X 12 = 118.481 (2.77) X 13 = 113.517 (-1.54)
X 14 = 117.941 (2.30) X 15 = 107.483 (-6.77) X 16 = 110.799 (-3.90)

X m1 = 117.923 (2.28) X m2 = 111.864 (-2.97) X m3 = 115.604 (0.44)
X m4 = 115.975 (0.59) X m5 = 115.948 (0.57) X m6 = 114.233 (-0.92)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.19417E+02 (9.5)	1.90640E+02 (12.3)	1.36698E+02 (10.1)
VR2 (cv2%)	4.34775E+01 (6.3)	3.75829E+01 (5.5)	
VR3 (cv3%)	8.72437E+01 (8.1)	8.90226E+01 (8.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.49750E+00	5.43909E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.443 (0.873)	1.570 (0.774)	2.134 (0.844)
- DOSE	13.023 (1.000)	8.158 (0.998)	11.377 (1.000)
- AMENDEMENT*DOSE	0.351 (0.288)	0.220 (0.194)	0.306 (0.257)
- SUBSIDIAIRE	1.023 (0.640)	1.253 (0.886)	
- AMENDEMENT*SUBSIDIAIRE	1.529 (0.774)	1.499 (0.770)	
- DOSE*SUBSIDIAIRE	0.511 (0.389)	0.501 (0.382)	
- AMENDEM*DOSE*SUBSID	0.009 (0.009)	0.009 (0.009)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.022 (0.916)	2.339 (0.871)	
- DOSE	16.160 (1.000)	12.469 (1.000)	
- AMENDEMENT*DOSE	0.435 (0.345)	0.336 (0.279)	
- SUBSIDIAIRE	0.516 (0.483)	0.398 (0.462)	
- AMENDEMENT*SUBSIDIAIRE	1.386 (0.757)	1.070 (0.697)	
- DOSE*SUBSIDIAIRE	0.463 (0.362)	0.357 (0.294)	
- AMENDEM*DOSE*SUBSID	0.009 (0.008)	0.007 (0.006)	

ANALYSE DE VARIANCE

INFLUENCE DE 2 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 17/12/84
parametre: TSE
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	84.068	84.956	84.288	83.119	83.123	81.935	85.409	83.030	81.535	82.656	81.879	79.692
X 12k	84.032	83.908	84.597	82.923	84.740	82.691	83.456	83.144	85.424	83.842	83.774	84.726
X 13k	85.966	84.957	85.309	85.498	85.524	85.020	85.516	83.802	87.500	85.677	85.578	85.176
X 21k	83.597	82.064	82.549	84.707	84.565	83.406	84.051	84.568	82.914	80.729	83.125	85.125
X 22k	85.481	85.547	84.841	84.506	85.245	84.640	85.344	83.665	84.772	86.671	85.779	85.106
X 23k	84.763	84.733	84.766	85.630	87.245	85.240	86.078	85.197	83.697	85.295	87.279	84.977

2 - MOYENNES ET ECARTS RELATIFS

X ... = 84.273

X 1.. = 84.067 (-0.24) X 2.. = 84.478 (0.24)

X .1. = 83.212 (-1.26) X .2. = 84.424 (0.18) X .3. = 85.182 (1.18)

X ..1 = 84.428 (0.18) X ..2 = 84.117 (-0.18)

X 11. = 82.974 (-1.54) X 12. = 83.938 (-0.40) X 13. = 85.290 (1.21)
X 21. = 83.449 (-0.93) X 22. = 84.910 (0.76) X 23. = 85.075 (0.95)

X 1.1 = 84.429 (0.19) X 1.2 = 83.706 (-0.67) X 2.1 = 84.428 (0.18) X 2.2 = 84.528 (0.30)

X .11 = 83.424 (-1.01) X .12 = 82.999 (-1.51)
X .21 = 84.593 (0.38) X .22 = 84.255 (-0.02)
X .31 = 85.269 (1.18) X .32 = 85.096 (0.98)

X 111 = 83.384 (-1.05) X 121 = 84.337 (0.08) X 131 = 85.566 (1.53)
X 112 = 82.565 (-2.03) X 122 = 83.539 (-0.87) X 132 = 85.013 (0.88)
X 211 = 83.465 (-0.96) X 221 = 84.848 (0.68) X 231 = 84.971 (0.83)
X 212 = 83.433 (-1.00) X 222 = 84.971 (0.83) X 232 = 85.179 (1.08)

X 11 = 84.307 (0.09) X 12 = 84.379 (0.13) X 13 = 84.448 (0.21)
X 14 = 84.438 (0.20) X 15 = 84.171 (-0.10) X 16 = 83.840 (-0.51)

X m1 = 84.649 (0.38) X m2 = 84.489 (0.28) X m3 = 84.455 (0.22)
X m4 = 83.996 (-0.33) X m5 = 84.118 (-0.18) X m6 = 83.726 (-0.65)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (ev1%)	1.73502E+00 (1.5)	1.44479E+00 (1.4)	1.64471E+00 (1.5)
VR2 (ev2%)	1.46691E+00 (1.4)	8.86780E-01 (1.1)	
VR3 (ev3%)	9.41762E-01 (1.2)	1.05779E+00 (1.2)	
HOMOGENEITE DES V.A.			
KI 2 DE BARTLETT	1.92909E+00	7.00710E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.780 (0.809)	2.102 (0.844)	1.846 (0.813)
- DOSE	13.904 (1.000)	16.413 (1.000)	14.416 (1.000)
- AMENDEMENT*DOSE	1.248 (0.696)	1.474 (0.753)	1.294 (0.704)
- SUBSIDIAIRE	1.193 (0.674)	1.973 (0.792)	
- AMENDEMENT*SUBSIDIAIRE	3.231 (0.919)	2.877 (0.901)	
- DOSE*SUBSIDIAIRE	0.105 (0.100)	0.074 (0.089)	
- AMENDEM*DOSE*SUBSID	0.012 (0.011)	0.011 (0.010)	
F OBSERVES ET PROBABILITES SI LES V.A. SONT HOMOGENES			
- AMENDEMENT	2.036 (0.871)	2.540 (0.887)	
- DOSE	18.243 (1.000)	19.836 (1.000)	
- AMENDEMENT*DOSE	1.638 (0.797)	1.781 (0.823)	
- SUBSIDIAIRE	1.346 (0.750)	1.464 (0.770)	
- AMENDEMENT*SUBSIDIAIRE	2.341 (0.872)	2.546 (0.887)	
- DOSE*SUBSIDIAIRE	0.076 (0.074)	0.083 (0.080)	
- AMENDEM*DOSE*SUBSID	0.009 (0.008)	0.009 (0.009)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

année:1984

date : 19/12/84
parametre: SGR
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	768.030	775.374	629.492	530.343	616.527	592.936	695.451	721.646	503.951	602.771	595.106	523.679
X 12k	752.999	751.029	866.848	721.778	756.658	680.818	726.156	611.530	581.424	709.641	784.299	783.484
X 13k	784.807	798.933	746.722	750.041	836.126	667.915	724.774	773.970	724.370	694.379	747.819	630.645
X 21k	700.439	672.291	488.510	639.621	699.026	658.519	744.000	734.606	581.975	442.250	664.088	749.657
X 22k	835.777	866.178	740.960	600.519	738.502	731.479	799.753	723.051	642.529	722.222	719.841	760.606
X 23k	869.720	826.041	721.383	791.877	811.896	768.620	825.064	783.671	741.827	762.497	661.300	713.556

2 - MOYENNES ET ECARTS RELATIFS

X ... = 707.670

X 1.. = 698.743 (-1.18) X 2..= 715.396 (1.18)

X .1. = 637.512 (-9.84) X .2. = 724.595 (3.89) X .3. = 749.102 (5.94)

X ..1 = 714.182 (1.01) X ..2 = 699.957 (-1.01)

X 11. = 628.775 (-11.07) X 12. = 727.414 (2.88) X 13. = 740.041 (4.66)
X 21. = 646.249 (-8.60) X 22. = 741.776 (4.91) X 23. = 758.163 (7.23)

X 1.1 = 713.531 (0.91) X 1.2 = 683.956 (-3.27) X 2.1 = 714.833 (1.10) X 2.2 = 715.959 (1.26)

X .11 = 638.883 (-9.64) X .12 = 636.141 (-10.03)
X .21 = 747.304 (5.69) X .22 = 721.886 (2.10)
X .31 = 756.359 (6.97) X .32 = 741.845 (4.92)

X 111 = 634.759 (-10.23) X 121 = 745.064 (5.37) X 131 = 766.770 (7.59)
X 112 = 622.791 (-11.92) X 122 = 709.763 (0.38) X 132 = 719.312 (1.73)
X 211 = 643.066 (-9.06) X 221 = 749.544 (6.01) X 231 = 751.948 (6.35)
X 212 = 649.491 (-8.14) X 222 = 734.009 (3.81) X 232 = 764.377 (8.10)

X L1 = 784.102 (10.83) X L2 = 685.841 (-3.00) X L3 = 712.418 (0.76)
X L4 = 738.664 (4.47) X L5 = 635.844 (-10.07) X L6 = 689.548 (-2.48)

X M1 = 728.122 (2.98) X M2 = 695.456 (-1.64) X M3 = 694.962 (-1.71)
X M4 = 710.768 (0.52) X M5 = 712.742 (0.80) X M6 = 700.267 (-0.95)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (d.l.1)	6.10342E-03 (11.0)	1.15638E+04 (15.2)	7.13998E+03 (12.0)
VR2 (d.l.2)	2.72855E-03 (7.4)	3.64482E+03 (8.5)	
VR3 (d.l.3)	3.68572E-03 (9.6)	3.49806E+03 (9.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.95499E+00	8.29326E+00	
PROBABILITE DU KI 2	0.0700	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.818 (0.373)	0.432 (0.476)	0.699 (0.418)
- DOSE	14.476 (1.000)	7.640 (0.997)	12.374 (1.000)
- AMENDEMENT*DOSE	0.004 (0.004)	0.002 (0.002)	0.003 (0.003)
- SUBSIDIAIRE	1.346 (0.701)	0.999 (0.365)	
- AMENDEMENT*SUBSIDIAIRE	1.151 (0.706)	1.213 (0.717)	
- DOSE*SUBSIDIAIRE	0.209 (0.166)	0.221 (0.194)	
- AMENDEM*DOSE*SUBSID	0.164 (0.150)	0.173 (0.157)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.096 (0.299)	0.741 (0.398)	
- DOSE	19.397 (1.000)	13.110 (1.000)	
- AMENDEMENT*DOSE	0.005 (0.005)	0.004 (0.003)	
- SUBSIDIAIRE	0.800 (0.379)	0.540 (0.472)	
- AMENDEMENT*SUBSIDIAIRE	0.931 (0.341)	0.629 (0.437)	
- DOSE*SUBSIDIAIRE	0.169 (0.154)	0.115 (0.108)	
- AMENDEM*DOSE*SUBSID	0.133 (0.124)	0.090 (0.086)	

FRET
%part 01

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.700	1.700	1.600	1.600	1.700	1.720	1.600	1.670	1.650	1.620	1.670	1.720
X 12k	1.650	1.650	1.550	1.600	1.700	1.700	1.700	1.620	1.600	1.650	1.620	1.650
X 13k	1.600	1.550	1.500	1.550	1.570	1.650	1.550	1.570	1.500	1.500	1.520	1.570
X 21k	1.650	1.700	1.600	1.600	1.600	1.720	1.650	1.600	1.650	1.620	1.670	1.600
X 22k	1.550	1.600	1.550	1.550	1.600	1.620	1.570	1.650	1.650	1.550	1.650	1.670
X 23k	1.650	1.650	1.600	1.500	1.450	1.400	1.600	1.600	1.620	1.550	1.720	1.620

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.612

X 1.. = 1.619 (0.38) X 2..= 1.606 (-0.38)

X .1. = 1.650 (2.35) X .2. = 1.621 (0.52) X .3. = 1.566 (-2.87)

X ..1 = 1.611 (-0.07) X ..2 = 1.614 (0.07)

X 11. = 1.662 (3.10) X 12. = 1.641 (1.76) X 13. = 1.552 (-3.72)
X 21. = 1.638 (1.60) X 22. = 1.601 (-0.72) X 23. = 1.580 (-2.02)

X 1.1 = 1.610 (-0.16) X 1.2 = 1.627 (0.91) X 2.1 = 1.613 (0.02) X 2.2 = 1.600 (-0.78)

X .11 = 1.645 (2.02) X .12 = 1.656 (2.69)
X .21 = 1.616 (0.21) X .22 = 1.626 (0.83)
X .31 = 1.573 (-2.43) X .32 = 1.559 (-3.31)

X 111 = 1.653 (2.53) X 121 = 1.637 (1.50) X 131 = 1.540 (-4.50)
X 112 = 1.672 (3.67) X 122 = 1.645 (2.02) X 132 = 1.565 (-2.95)
X 211 = 1.637 (1.50) X 221 = 1.595 (-1.09) X 231 = 1.607 (-0.36)
X 212 = 1.640 (1.71) X 222 = 1.607 (-0.36) X 232 = 1.553 (-3.67)

X 11 = 1.637 (1.55) X 12 = 1.567 (-2.84) X 13 = 1.619 (0.41)
X 14 = 1.615 (0.16) X 15 = 1.597 (-0.98) X 16 = 1.640 (1.71)

X a1 = 1.591 (-1.34) X a2 = 1.615 (0.16) X a3 = 1.620 (0.47)
X a4 = 1.611 (-0.10) X a5 = 1.617 (0.26) X a6 = 1.622 (0.57)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.17600E-03 (4.0)	5.68667E-03 (4.7)	4.83833E-03 (4.3)
VR2 (cv2%)	1.19889E-03 (2.1)	3.03222E-03 (3.4)	
VR3 (cv3%)	1.42956E-03 (2.3)	1.06289E-03 (2.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.16519E+00	1.42456E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.644 (0.435)	0.473 (0.495)	0.556 (0.471)
- DOSE	10.478 (0.999)	7.694 (0.997)	9.043 (0.999)
- AMENDEMENT*DOSE	1.790 (0.814)	1.315 (0.714)	1.545 (0.763)
- SUBSIDIAIRE	0.074 (0.209)	0.029 (0.136)	
- AMENDEMENT*SUBSIDIAIRE	2.833 (0.899)	3.810 (0.941)	
- DOSE*SUBSIDIAIRE	0.846 (0.444)	1.138 (0.663)	
- AMENDEM*DOSE*SUBSID	1.927 (0.835)	2.591 (0.907)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.073 (0.694)	0.865 (0.360)	
- DOSE	17.466 (1.000)	14.072 (1.000)	
- AMENDEMENT*DOSE	2.985 (0.942)	2.404 (0.901)	
- SUBSIDIAIRE	0.035 (0.154)	0.029 (0.139)	
- AMENDEMENT*SUBSIDIAIRE	1.617 (0.793)	1.303 (0.742)	
- DOSE*SUBSIDIAIRE	0.483 (0.374)	0.389 (0.315)	
- AMENDEM*DOSE*SUBSID	1.099 (0.658)	0.886 (0.422)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/03/84 parametre :N-GR unite : %

DONNEES :

DDL = 20 NI = 12 SE = 0.005

4 T = 1.650
8 T = 1.621
12 T = 1.566

RESULTATS :

		1 12 T	2 8 T	3 4 T
1	12 T			+
2	8 T			
3	4 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: P-GR
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.330	0.330	0.310	0.310	0.310	0.310	0.300	0.300	0.300	0.300	0.310	0.320
X 12k	0.320	0.340	0.310	0.290	0.310	0.320	0.320	0.310	0.290	0.310	0.320	0.320
X 13k	0.330	0.320	0.320	0.300	0.310	0.330	0.290	0.300	0.270	0.270	0.280	0.270
X 21k	0.330	0.330	0.290	0.300	0.300	0.300	0.310	0.290	0.310	0.300	0.340	0.320
X 22k	0.320	0.310	0.290	0.320	0.310	0.310	0.280	0.310	0.330	0.310	0.320	0.310
X 23k	0.330	0.330	0.320	0.300	0.300	0.310	0.300	0.300	0.300	0.280	0.320	0.310

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.309

X 1.. = 0.308 (-0.27) X 2..= 0.309 (0.27)

X .1. = 0.310 (0.59) X .2. = 0.312 (0.99) X .3. = 0.304 (-1.58)

X ..1 = 0.309 (0.18) X ..2 = 0.308 (-0.18)

X 11. = 0.311 (0.72) X 12. = 0.313 (1.53) X 13. = 0.299 (-3.06)
X 21. = 0.310 (0.45) X 22. = 0.310 (0.45) X 23. = 0.308 (-0.09)

X 1.1 = 0.307 (-0.45) X 1.2 = 0.308 (-0.09) X 2.1 = 0.311 (0.81) X 2.2 = 0.308 (-0.27)

X .11 = 0.312 (0.99) X .12 = 0.309 (0.18)
X .21 = 0.310 (0.45) X .22 = 0.313 (1.53)
X .31 = 0.306 (-0.90) X .32 = 0.302 (-2.25)

X 111 = 0.310 (0.45) X 121 = 0.312 (0.99) X 131 = 0.300 (-2.79)
X 112 = 0.312 (0.99) X 122 = 0.315 (2.07) X 132 = 0.298 (-3.33)
X 211 = 0.313 (1.53) X 221 = 0.308 (-0.09) X 231 = 0.312 (0.99)
X 212 = 0.307 (-0.63) X 222 = 0.312 (0.99) X 232 = 0.305 (-1.17)

X 11 = 0.327 (5.85) X 12 = 0.305 (-1.17) X 13 = 0.310 (0.45)
X 14 = 0.301 (-2.52) X 15 = 0.298 (-3.60) X 16 = 0.312 (0.99)

X m1 = 0.318 (3.15) X m2 = 0.302 (-2.25) X m3 = 0.303 (-1.71)
X m4 = 0.311 (0.72) X m5 = 0.309 (0.18) X m6 = 0.308 (-0.09)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.68222E-04 (5.3)	4.40222E-04 (6.8)	2.29722E-04 (4.9)
VR2 (cv2%)	7.22222E-05 (2.8)	1.05556E-04 (3.3)	
VR3 (cv3%)	1.11556E-04 (3.4)	1.04889E-04 (3.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	5.52794E+00	1.19401E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.186 (0.327)	0.114 (0.262)	0.218 (0.350)
- DOSE	1.621 (0.783)	0.988 (0.389)	1.892 (0.830)
- AMENDEMENT*DOSE	0.979 (0.392)	0.596 (0.437)	1.143 (0.660)
- SUBSIDIAIRE	0.308 (0.394)	0.211 (0.333)	
- AMENDEMENT*SUBSIDIAIRE	0.797 (0.384)	0.847 (0.369)	
- DOSE*SUBSIDIAIRE	0.834 (0.449)	0.887 (0.427)	
- AMENDEM*DOSE*SUBSID	0.237 (0.206)	0.252 (0.218)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.294 (0.403)	0.209 (0.346)	
- DOSE	2.553 (0.914)	1.818 (0.829)	
- AMENDEMENT*DOSE	1.541 (0.777)	1.098 (0.658)	
- SUBSIDIAIRE	0.130 (0.280)	0.093 (0.240)	
- AMENDEMENT*SUBSIDIAIRE	0.522 (0.480)	0.372 (0.448)	
- DOSE*SUBSIDIAIRE	0.546 (0.412)	0.389 (0.315)	
- AMENDEM*DOSE*SUBSID	0.155 (0.143)	0.110 (0.105)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: K-GR
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.490	0.500	0.480	0.450	0.450	0.430	0.410	0.410	0.450	0.450	0.440	0.430
X 12k	0.450	0.460	0.410	0.430	0.440	0.440	0.440	0.450	0.410	0.430	0.430	0.400
X 13k	0.450	0.450	0.450	0.430	0.430	0.440	0.390	0.400	0.380	0.400	0.400	0.400
X 21k	0.460	0.480	0.460	0.450	0.410	0.410	0.410	0.400	0.460	0.450	0.480	0.430
X 22k	0.440	0.440	0.400	0.480	0.430	0.440	0.400	0.450	0.410	0.410	0.430	0.410
X 23k	0.460	0.450	0.430	0.430	0.450	0.440	0.400	0.430	0.440	0.440	0.440	0.400

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.434

X 1.. = 0.433 (-0.16) X 2..= 0.435 (0.16)

X .1. = 0.445 (2.62) X .2. = 0.430 (-0.83) X .3. = 0.426 (-1.79)

X ..1 = 0.434 (-0.10) X ..2 = 0.434 (0.10)

X 11. = 0.449 (3.49) X 12. = 0.432 (-0.35) X 13. = 0.418 (-3.62)
X 21. = 0.442 (1.76) X 22. = 0.428 (-1.31) X 23. = 0.434 (0.03)

X 1.1 = 0.433 (-0.16) X 1.2 = 0.433 (-0.16) X 2.1 = 0.434 (-0.03) X 2.2 = 0.436 (0.35)

X .11 = 0.450 (3.68) X .12 = 0.441 (1.57)
X .21 = 0.424 (-2.27) X .22 = 0.437 (0.61)
X .31 = 0.427 (-1.70) X .32 = 0.426 (-1.89)

X 111 = 0.453 (4.45) X 121 = 0.430 (-0.93) X 131 = 0.417 (-4.00)
X 112 = 0.445 (2.53) X 122 = 0.435 (0.22) X 132 = 0.420 (-3.23)
X 211 = 0.447 (2.91) X 221 = 0.418 (-3.62) X 231 = 0.437 (0.61)
X 212 = 0.437 (0.61) X 222 = 0.438 (0.99) X 232 = 0.432 (-0.54)

X 11 = 0.461 (6.18) X 12 = 0.442 (1.76) X 13 = 0.434 (0.03)
X 14 = 0.416 (-4.19) X 15 = 0.427 (-1.50) X 16 = 0.424 (-2.27)

X m1 = 0.448 (3.30) X m2 = 0.429 (-1.12) X m3 = 0.429 (-1.12)
X m4 = 0.433 (-0.35) X m5 = 0.430 (-0.93) X m6 = 0.435 (0.22)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.63389E-04 (5.5)	1.03206E-03 (7.4)	5.41389E-04 (5.4)
VR2 (cv2%)	5.65833E-04 (5.5)	1.42500E-04 (2.8)	
VR3 (cv3%)	2.05167E-04 (3.3)	2.89833E-04 (3.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	5.86949E+00	1.16177E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.062 (0.199)	0.034 (0.150)	0.064 (0.202)
- DOSE	4.329 (0.976)	2.363 (0.887)	4.505 (0.979)
- AMENDEMENT*DOSE	1.696 (0.798)	0.926 (0.412)	1.765 (0.804)
- SUBSIDIAIRE	0.022 (0.118)	0.088 (0.226)	
- AMENDEMENT*SUBSIDIAIRE	0.061 (0.198)	0.043 (0.169)	
- DOSE*SUBSIDIAIRE	3.493 (0.955)	2.473 (0.897)	
- AMENDEM*DOSE*SUBSID	1.056 (0.636)	0.748 (0.488)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.090 (0.237)	0.061 (0.198)	
- DOSE	6.343 (0.996)	4.264 (0.981)	
- AMENDEMENT*DOSE	2.485 (0.908)	1.671 (0.803)	
- SUBSIDIAIRE	0.033 (0.148)	0.022 (0.122)	
- AMENDEMENT*SUBSIDIAIRE	0.033 (0.148)	0.022 (0.122)	
- DOSE*SUBSIDIAIRE	1.864 (0.836)	1.253 (0.706)	
- AMENDEM*DOSE*SUBSID	0.563 (0.422)	0.379 (0.308)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: MG-GR
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.140	0.130	0.130	0.140	0.150	0.160	0.140	0.150	0.140	0.140	0.150	0.150
X 12k	0.130	0.140	0.120	0.130	0.140	0.150	0.150	0.150	0.140	0.140	0.150	0.150
X 13k	0.130	0.130	0.140	0.130	0.150	0.150	0.140	0.140	0.130	0.140	0.140	0.140
X 21k	0.140	0.150	0.130	0.130	0.140	0.140	0.140	0.140	0.140	0.140	0.160	0.140
X 22k	0.130	0.130	0.130	0.130	0.150	0.150	0.130	0.150	0.150	0.140	0.150	0.140
X 23k	0.130	0.140	0.130	0.120	0.130	0.120	0.140	0.140	0.140	0.140	0.150	0.140

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.140

X 1.. = 0.141 (0.80) X 2..= 0.139 (-0.80)

X .1. = 0.142 (1.69) X .2. = 0.140 (0.50) X .3. = 0.137 (-2.19)

X ..1 = 0.139 (-0.20) X ..2 = 0.140 (0.20)

X 11. = 0.143 (2.58) X 12. = 0.141 (0.80) X 13. = 0.138 (-0.99)
X 21. = 0.141 (0.80) X 22. = 0.140 (0.20) X 23. = 0.135 (-3.38)

X 1.1 = 0.139 (-0.20) X 1.2 = 0.142 (1.79) X 2.1 = 0.139 (-0.20) X 2.2 = 0.138 (-1.39)

X .11 = 0.142 (1.39) X .12 = 0.143 (1.99)
X .21 = 0.139 (-0.40) X .22 = 0.142 (1.39)
X .31 = 0.137 (-1.59) X .32 = 0.136 (-2.78)

X 111 = 0.142 (1.39) X 121 = 0.138 (-0.99) X 131 = 0.138 (-0.99)
X 112 = 0.145 (3.78) X 122 = 0.143 (2.58) X 132 = 0.138 (-0.99)
X 211 = 0.142 (1.39) X 221 = 0.140 (0.20) X 231 = 0.137 (-2.19)
X 212 = 0.140 (0.20) X 222 = 0.140 (0.20) X 232 = 0.133 (-4.57)

X 11 = 0.135 (-3.38) X 12 = 0.130 (-6.96) X 13 = 0.144 (3.18)
X 14 = 0.143 (1.99) X 15 = 0.140 (0.20) X 16 = 0.147 (4.97)

X m1 = 0.140 (0.20) X m2 = 0.138 (-0.99) X m3 = 0.140 (0.20)
X m4 = 0.142 (1.39) X m5 = 0.139 (-0.40) X m6 = 0.139 (-0.40)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	6.42222E-05 (5.7)	1.53556E-04 (8.9)	7.63889E-05 (6.3)
VR2 (cv2%)	4.88889E-05 (5.0)	9.55556E-05 (7.0)	
VR3 (cv3%)	3.22222E-05 (4.1)	2.28889E-05 (3.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.54944E+00	1.80351E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.384 (0.751)	0.579 (0.460)	1.164 (0.706)
- DOSE	2.876 (0.926)	1.203 (0.683)	2.418 (0.892)
- AMENDEMENT*DOSE	0.151 (0.139)	0.063 (0.062)	0.127 (0.119)
- SUBSIDIAIRE	0.114 (0.254)	0.058 (0.188)	
- AMENDEMENT*SUBSIDIAIRE	2.759 (0.894)	3.883 (0.943)	
- DOSE*SUBSIDIAIRE	0.819 (0.456)	1.153 (0.668)	
- AMENDEM*DOSE*SUBSID	0.043 (0.042)	0.061 (0.059)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.904 (0.830)	1.078 (0.695)	
- DOSE	3.956 (0.975)	2.241 (0.885)	
- AMENDEMENT*DOSE	0.208 (0.185)	0.118 (0.111)	
- SUBSIDIAIRE	0.119 (0.269)	0.067 (0.208)	
- AMENDEMENT*SUBSIDIAIRE	1.904 (0.830)	1.078 (0.695)	
- DOSE*SUBSIDIAIRE	0.565 (0.423)	0.320 (0.268)	
- AMENDEM*DOSE*SUBSID	0.030 (0.029)	0.017 (0.016)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: TCE-GR
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.440	1.850	1.710	1.590	1.690	1.770	1.640	2.030	1.920	1.860	2.140	2.250
X 12k	1.960	2.060	1.530	1.500	1.680	1.580	1.810	1.720	1.680	1.730	1.900	1.930
X 13k	2.810	2.550	2.760	1.690	1.700	1.630	2.350	2.370	2.140	1.560	1.710	1.680
X 21k	2.060	2.040	1.570	1.580	1.660	1.830	1.760	1.690	2.350	2.190	2.400	1.820
X 22k	2.750	2.070	1.480	1.680	1.680	1.650	1.660	1.810	1.790	1.680	1.850	1.800
X 23k	1.900	2.030	1.600	1.510	1.580	1.610	2.330	1.920	2.880	2.420	1.900	2.470

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.916

X 1.. = 1.914 (-0.06) X 2..= 1.917 (0.06)

X .1. = 1.910 (-0.29) X .2. = 1.791 (-6.51) X .3. = 2.046 (6.80)

X ..1 = 1.966 (2.62) X ..2 = 1.865 (-2.62)

X 11. = 1.907 (-0.42) X 12. = 1.757 (-8.29) X 13. = 2.079 (8.54)
X 21. = 1.912 (-0.16) X 22. = 1.825 (-4.73) X 23. = 2.012 (5.06)

X 1.1 = 1.976 (3.16) X 1.2 = 1.853 (-3.28) X 2.1 = 1.956 (2.09) X 2.2 = 1.878 (-1.97)

X .11 = 1.945 (1.54) X .12 = 1.875 (-2.12)
X .21 = 1.814 (-5.29) X .22 = 1.767 (-7.73)
X .31 = 2.138 (11.63) X .32 = 1.953 (1.97)

X 111 = 1.923 (0.41) X 121 = 1.760 (-8.12) X 131 = 2.245 (17.20)
X 112 = 1.892 (-1.25) X 122 = 1.753 (-8.47) X 132 = 1.913 (-0.12)
X 211 = 1.967 (2.67) X 221 = 1.868 (-2.47) X 231 = 2.032 (6.06)
X 212 = 1.858 (-2.99) X 222 = 1.782 (-6.99) X 232 = 1.993 (4.06)

X 11 = 2.210 (15.37) X 12 = 1.683 (-12.12) X 13 = 1.672 (-12.73)
X 14 = 1.924 (0.45) X 15 = 2.017 (5.28) X 16 = 1.987 (3.76)

X m1 = 1.929 (0.71) X m2 = 1.749 (-8.69) X m3 = 1.852 (-3.29)
X m4 = 1.906 (-0.51) X m5 = 1.980 (3.36) X m6 = 2.077 (8.41)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.27179E-01 (18.6)	2.00873E-01 (23.4)	1.21743E-01 (18.2)
VR2 (cv2%)	4.19956E-02 (10.7)	8.04722E-02 (14.8)	
VR3 (cv3%)	5.16169E-02 (11.9)	4.39216E-02 (10.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	5.21734E+00	1.20890E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.001 (0.023)	0.000 (0.019)	0.001 (0.023)
- DOSE	3.072 (0.937)	1.945 (0.838)	3.209 (0.944)
- AMENDEMENT*DOSE	0.215 (0.190)	0.136 (0.127)	0.225 (0.197)
- SUBSIDIAIRE	4.334 (0.909)	2.262 (0.808)	
- AMENDEMENT*SUBSIDIAIRE	0.181 (0.323)	0.213 (0.347)	
- DOSE*SUBSIDIAIRE	0.637 (0.459)	0.749 (0.487)	
- AMENDEM*DOSE*SUBSID	1.338 (0.720)	1.573 (0.774)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.001 (0.028)	0.001 (0.024)	
- DOSE	4.831 (0.988)	3.540 (0.965)	
- AMENDEMENT*DOSE	0.338 (0.281)	0.248 (0.216)	
- SUBSIDIAIRE	2.250 (0.864)	1.649 (0.798)	
- AMENDEMENT*SUBSIDIAIRE	0.115 (0.265)	0.085 (0.231)	
- DOSE*SUBSIDIAIRE	0.407 (0.327)	0.298 (0.252)	
- AMENDEM*DOSE*SUBSID	0.854 (0.435)	0.626 (0.456)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	70.796	107.272	111.607	99.107	100.982	96.764	112.844	107.272	99.107	99.082	91.743	92.861
X 12k	123.000	115.888	118.919	113.519	96.090	72.110	109.244	117.761	109.524	99.357	114.679	117.699
X 13k	109.391	121.101	132.075	131.250	112.727	119.588	131.883	131.818	120.183	113.514	108.772	114.679
X 21k	111.650	91.964	119.000	113.462	110.619	102.773	84.906	101.770	96.078	82.143	94.643	105.607
X 22k	103.945	124.771	117.273	120.383	117.636	123.636	112.381	109.909	114.851	106.542	118.349	113.761
X 23k	122.124	126.316	123.864	136.364	124.545	121.101	130.275	124.561	110.185	115.094	120.192	124.242

2 - MOYENNES ET ECARTS RELATIFS

X ... = 110.994

X 1.. = 108.272 (-2.45) X 2..= 113.715 (2.45)

X .1. = 100.143 (-9.78) X .2. = 110.956 (-0.03) X .3. = 121.882 (9.81)

X ..1 = 111.816 (0.74) X ..2 = 110.171 (-0.74)

X 11. = 99.068 (-10.74) X 12. = 105.207 (-5.21) X 13. = 120.340 (8.60)
X 21. = 101.218 (-8.81) X 22. = 116.704 (5.14) X 23. = 123.224 (11.02)

X 1.1 = 109.280 (-1.54) X 1.2 = 107.263 (-3.36) X 2.1 = 114.352 (3.03) X 2.2 = 113.078 (1.88)

X .11 = 100.330 (-9.61) X .12 = 99.957 (-9.94)
X .21 = 114.658 (3.30) X .22 = 107.253 (-3.37)
X .31 = 120.462 (8.53) X .32 = 122.302 (11.09)

X 111 = 97.843 (-11.85) X 121 = 110.909 (-0.08) X 131 = 119.089 (7.29)
X 112 = 100.293 (-9.34) X 122 = 99.506 (-10.35) X 132 = 121.992 (9.91)
X 211 = 102.816 (-7.37) X 221 = 118.406 (6.68) X 231 = 121.804 (9.77)
X 212 = 99.621 (-10.25) X 222 = 115.001 (3.61) X 232 = 124.613 (12.27)

X 11 = 113.160 (1.95) X 12 = 120.137 (8.24) X 13 = 104.013 (-6.29)
X 14 = 113.452 (2.22) X 15 = 105.447 (-5.00) X 16 = 109.752 (-1.12)

X m1 = 110.974 (-0.02) X m2 = 109.823 (-1.05) X m3 = 115.777 (4.31)
X m4 = 116.250 (4.74) X m5 = 114.270 (2.95) X m6 = 98.368 (-10.92)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.46967E+02 (14.2)	2.30516E+02 (13.7)	1.32916E+02 (12.2)
VR2 (cv2%)	7.59728E+01 (7.9)	6.57812E+01 (7.3)	
VR3 (cv3%)	1.06329E+02 (9.3)	1.08367E+02 (9.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.89665E+00	4.43562E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.160 (0.849)	2.314 (0.863)	2.916 (0.900)
- DOSE	11.481 (1.000)	12.300 (1.000)	15.501 (1.000)
- AMENDEMENT*DOSE	0.669 (0.475)	0.717 (0.499)	0.904 (0.424)
- SUBSIDIAIRE	0.641 (0.464)	0.741 (0.432)	
- AMENDEMENT*SUBSIDIAIRE	0.023 (0.126)	0.023 (0.125)	
- DOSE*SUBSIDIAIRE	1.549 (0.769)	1.520 (0.763)	
- AMENDEM*DOSE*SUBSID	0.665 (0.472)	0.652 (0.466)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.343 (0.930)	3.487 (0.936)	
- DOSE	17.772 (1.000)	18.536 (1.000)	
- AMENDEMENT*DOSE	1.036 (0.636)	1.081 (0.652)	
- SUBSIDIAIRE	0.305 (0.410)	0.319 (0.418)	
- AMENDEMENT*SUBSIDIAIRE	0.016 (0.103)	0.016 (0.106)	
- DOSE*SUBSIDIAIRE	1.032 (0.635)	1.077 (0.651)	
- AMENDEM*DOSE*SUBSID	0.443 (0.350)	0.462 (0.362)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	68.688	96.313	95.690	84.793	93.668	84.114	100.302	94.982	86.013	87.801	81.328	82.787
X 12k	109.033	107.084	108.367	105.274	105.858	136.079	96.330	97.564	95.238	90.073	104.640	103.268
X 13k	96.813	111.757	114.531	112.741	102.187	105.290	114.591	115.506	105.982	99.050	96.348	100.879
X 21k	99.229	83.135	99.908	98.261	96.683	91.194	80.645	93.894	83.966	75.356	84.554	98.067
X 22k	118.692	111.024	109.078	105.539	99.330	106.469	101.194	90.141	103.287	100.149	104.490	101.724
X 23k	108.405	110.840	107.335	120.043	109.699	106.894	113.642	108.261	119.127	109.753	102.685	110.257

2 - MOYENNES ET ECARTS RELATIFS

X ... = 100.747

X 1.. = 99.746 (-0.99) X 2..= 101.749 (0.99)

X .1. = 89.224 (-11.44) X .2. = 104.580 (3.80) X .3. = 108.438 (7.63)

X ..1 = 100.485 (-0.26) X ..2 = 101.010 (0.26)

X 11. = 88.040 (-12.61) X 12. = 104.901 (4.12) X 13. = 106.298 (5.51)
X 21. = 90.408 (-10.26) X 22. = 104.260 (3.49) X 23. = 110.578 (9.76)

X 1.1 = 98.639 (-2.09) X 1.2 = 100.853 (0.10) X 2.1 = 102.731 (1.57) X 2.2 = 101.167 (0.42)

X .11 = 89.223 (-11.44) X .12 = 89.225 (-11.44)
X .21 = 104.628 (3.85) X .22 = 104.532 (3.76)
X .31 = 107.604 (6.81) X .32 = 109.273 (8.46)

X 111 = 87.615 (-13.04) X 121 = 103.244 (2.48) X 131 = 105.059 (4.28)
X 112 = 88.465 (-12.19) X 122 = 106.557 (5.77) X 132 = 107.537 (6.74)
X 211 = 90.831 (-9.84) X 221 = 106.012 (5.23) X 231 = 110.149 (9.33)
X 212 = 89.984 (-10.68) X 222 = 102.507 (1.75) X 232 = 111.008 (10.18)

X 11 = 101.751 (1.00) X 12 = 105.130 (4.35) X 13 = 103.122 (2.36)
X 14 = 100.588 (-0.16) X 15 = 96.308 (-4.41) X 16 = 97.586 (-3.14)

X m1 = 99.068 (-1.67) X m2 = 96.790 (-3.93) X m3 = 102.093 (1.34)
X m4 = 102.280 (1.52) X m5 = 101.532 (0.78) X m6 = 102.722 (1.96)

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	68.688	96.313	95.690	84.793	93.668	84.114	100.302	94.982	86.013	87.801	81.328	82.787
X 12k	109.033	107.084	108.367	105.274	105.858	136.079	96.330	97.564	95.238	90.073	104.640	103.268
X 13k	96.813	111.757	114.531	112.741	102.187	105.290	114.591	115.506	105.882	99.050	96.348	100.879
X 21k	99.229	83.135	99.908	98.261	96.683	91.194	80.645	93.894	83.966	75.356	84.554	98.067
X 22k	118.692	111.024	109.078	105.539	99.330	106.469	101.194	90.141	103.287	100.149	104.490	101.724
X 23k	108.405	110.840	107.335	120.043	109.699	106.894	113.642	108.261	119.127	109.753	102.685	110.257

2 - MOYENNES ET ECARTS RELATIFS

X ... = 100.747

X 1.. = 99.746 (-0.99) X 2..= 101.749 (0.99)

X .1. = 89.224 (-11.44) X .2. = 104.580 (3.80) X .3. = 108.438 (7.63)

X ..1 = 100.485 (-0.26) X ..2 = 101.010 (0.26)

X 11. = 88.040 (-12.61) X 12. = 104.901 (4.12) X 13. = 106.298 (5.51)
X 21. = 90.408 (-10.26) X 22. = 104.260 (3.49) X 23. = 110.578 (9.76)

X 1.1 = 98.639 (-2.09) X 1.2 = 100.853 (0.10) X 2.1 = 102.331 (1.57) X 2.2 = 101.167 (0.42)

X .11 = 89.223 (-11.44) X .12 = 89.225 (-11.44)
X .21 = 104.628 (3.85) X .22 = 104.532 (3.76)
X .31 = 107.604 (6.81) X .32 = 109.273 (8.46)

X 111 = 87.615 (-13.04) X 121 = 103.244 (2.48) X 131 = 105.059 (4.28)
X 112 = 88.465 (-12.19) X 122 = 106.557 (5.77) X 132 = 107.537 (6.74)
X 211 = 90.831 (-9.84) X 221 = 106.012 (5.23) X 231 = 110.149 (9.33)
X 212 = 89.984 (-10.68) X 222 = 102.507 (1.75) X 232 = 111.008 (10.18)

X 11 = 101.751 (1.00) X 12 = 105.130 (4.35) X 13 = 103.122 (2.36)
X 14 = 100.588 (-0.16) X 15 = 96.308 (-4.41) X 16 = 97.586 (-3.14)

X m1 = 99.068 (-1.67) X m2 = 96.790 (-3.93) X m3 = 102.093 (1.34)
X m4 = 102.280 (1.52) X m5 = 101.532 (0.78) X m6 = 102.722 (1.96)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.00018E+01 (8.9)	9.36482E+01 (9.6)	8.37096E+01 (9.1)
VR2 (cv2%)	4.06762E+01 (6.3)	8.36039E+01 (9.1)	
VR3 (cv3%)	6.01426E+01 (7.7)	5.15570E+01 (7.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	9.58138E-01	1.97600E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.902 (0.354)	0.771 (0.392)	0.862 (0.367)
- DOSE	30.994 (1.000)	26.478 (1.000)	29.621 (1.000)
- AMENDEMENT*DOSE	0.462 (0.359)	0.394 (0.317)	0.441 (0.346)
- SUBSIDIAIRE	0.122 (0.262)	0.059 (0.189)	
- AMENDEMENT*SUBSIDIAIRE	0.854 (0.367)	0.996 (0.329)	
- DOSE*SUBSIDIAIRE	0.098 (0.094)	0.114 (0.108)	
- AMENDEM*DOSE*SUBSID	0.221 (0.195)	0.258 (0.223)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.091 (0.698)	1.008 (0.679)	
- DOSE	37.490 (1.000)	34.632 (1.000)	
- AMENDEMENT*DOSE	0.558 (0.419)	0.516 (0.394)	
- SUBSIDIAIRE	0.075 (0.218)	0.069 (0.211)	
- AMENDEMENT*SUBSIDIAIRE	0.776 (0.386)	0.717 (0.406)	
- DOSE*SUBSIDIAIRE	0.089 (0.086)	0.082 (0.079)	
- AMENDEM*DOSE*SUBSID	0.201 (0.180)	0.186 (0.168)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 06/0..
parametre: QG
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	444.349	608.794	614.303	544.350	564.323	531.680	629.055	600.382	552.180	550.651	510.059	519.207
X 12k	635.350	661.014	690.336	655.035	674.353	653.435	651.712	611.884	578.483	551.558	656.262	668.055
X 13k	664.541	700.897	701.326	723.772	645.920	597.945	673.398	730.112	664.049	630.985	628.045	632.674
X 21k	592.925	533.706	582.180	591.993	625.452	567.432	493.829	607.411	497.576	483.766	542.818	605.350
X 22k	744.387	696.297	689.483	630.627	627.862	672.987	614.660	569.782	606.971	618.201	655.319	637.972
X 23k	701.287	722.514	699.663	693.582	693.405	670.396	712.720	705.698	741.236	672.067	618.648	637.041

2 - MOYENNES ET ECARTS RELATIFS

X ... = 629.274

X 1.. = 626.402 (-0.46) X 2..= 632.146 (0.46)

X .1. = 558.074 (-11.31) X .2. = 652.168 (3.64) X .3. = 677.580 (7.68)

X ..1 = 628.291 (-0.16) X ..2 = 630.257 (0.16)

X 11. = 555.778 (-11.68) X 12. = 657.290 (4.45) X 13. = 666.139 (5.86)
X 21. = 560.370 (-10.95) X 22. = 647.046 (2.82) X 23. = 689.021 (9.49)

X 1.1 = 621.003 (-1.31) X 1.2 = 631.802 (0.40) X 2.1 = 635.579 (1.00) X 2.2 = 628.712 (-0.09)

X .11 = 554.087 (-11.95) X .12 = 562.060 (-10.68)
X .21 = 652.098 (3.63) X .22 = 652.237 (3.65)
X .31 = 678.686 (7.85) X .32 = 676.474 (7.50)

X 111 = 552.378 (-12.22) X 121 = 647.749 (2.94) X 131 = 662.880 (5.34)
X 112 = 559.177 (-11.14) X 122 = 666.830 (5.97) X 132 = 669.397 (6.38)
X 211 = 555.797 (-11.68) X 221 = 656.447 (4.32) X 231 = 694.493 (10.36)
X 212 = 564.943 (-10.22) X 222 = 637.644 (1.33) X 232 = 683.550 (8.63)

X 11 = 642.172 (2.05) X 12 = 651.387 (3.51) X 13 = 643.766 (2.30)
X 14 = 633.387 (0.65) X 15 = 595.644 (-5.34) X 16 = 609.288 (-3.18)

X m1 = 623.248 (-0.96) X m2 = 612.545 (-2.66) X m3 = 631.107 (0.29)
X m4 = 637.615 (1.33) X m5 = 624.699 (-0.73) X m6 = 646.429 (2.73)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.38652E+03 (9.2)	4.20657E+03 (10.3)	3.81056E+03 (9.8)
VR2 (cv2%)	1.16680E+03 (5.4)	2.36736E+03 (7.7)	
VR3 (cv3%)	2.02962E+03 (7.2)	1.78951E+03 (6.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.55706E+00	3.96372E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.175 (0.318)	0.141 (0.289)	0.156 (0.301)
- DOSE	28.089 (1.000)	22.613 (1.000)	24.963 (1.000)
- AMENDEMENT*DOSE	0.488 (0.375)	0.393 (0.316)	0.434 (0.341)
- SUBSIDIAIRE	0.060 (0.190)	0.029 (0.136)	
- AMENDEMENT*SUBSIDIAIRE	0.692 (0.418)	0.785 (0.388)	
- DOSE*SUBSIDIAIRE	0.084 (0.081)	0.095 (0.091)	
- AMENDEM*DOSE*SUBSID	0.299 (0.252)	0.339 (0.280)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.239 (0.367)	0.211 (0.347)	
- DOSE	38.263 (1.000)	33.803 (1.000)	
- AMENDEMENT*DOSE	0.665 (0.477)	0.587 (0.435)	
- SUBSIDIAIRE	0.028 (0.138)	0.025 (0.130)	
- AMENDEMENT*SUBSIDIAIRE	0.565 (0.462)	0.499 (0.490)	
- DOSE*SUBSIDIAIRE	0.069 (0.067)	0.061 (0.059)	
- AMENDEM*DOSE*SUBSID	0.244 (0.213)	0.216 (0.191)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: GN-GR
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	7.554	10.349	9.829	8.710	9.593	9.145	10.065	10.026	9.111	8.921	8.518	8.930
X 12k	10.483	10.907	10.700	10.481	11.464	14.508	11.079	9.913	9.256	9.101	10.631	11.023
X 13k	10.633	10.864	10.520	11.218	10.141	9.866	10.438	11.463	9.961	9.465	9.546	9.933
X 21k	9.783	9.073	9.315	9.472	10.007	9.760	8.148	9.719	8.210	7.837	9.065	9.686
X 22k	11.538	11.141	10.687	9.775	10.046	10.902	9.650	9.401	10.015	9.582	10.813	10.654
X 23k	11.571	11.921	11.195	10.404	10.054	9.386	11.404	11.291	12.008	10.417	10.641	10.320

2 - MOYENNES ET ECARTS RELATIFS

X ... = 10.128

X 1.. = 10.121 (-0.07) X 2..= 10.136 (0.07)

X .1. = 9.201 (-9.15) X .2. = 10.573 (4.39) X .3. = 10.611 (4.76)

X ..1 = 10.102 (-0.26) X ..2 = 10.155 (0.26)

X 11. = 9.229 (-8.88) X 12. = 10.795 (6.59) X 13. = 10.337 (2.06)
X 21. = 9.173 (-9.43) X 22. = 10.350 (2.19) X 23. = 10.884 (7.46)

X 1.1 = 9.973 (-1.53) X 1.2 = 10.268 (1.38) X 2.1 = 10.231 (1.01) X 2.2 = 10.041 (-0.86)

X .11 = 9.100 (-10.15) X .12 = 9.302 (-8.16)
X .21 = 10.530 (3.97) X .22 = 10.616 (4.81)
X .31 = 10.676 (5.41) X .32 = 10.546 (4.12)

X 111 = 9.112 (-10.04) X 121 = 10.602 (4.68) X 131 = 10.206 (0.77)
X 112 = 9.347 (-7.71) X 122 = 10.989 (8.49) X 132 = 10.468 (3.36)
X 211 = 9.088 (-10.27) X 221 = 10.458 (3.26) X 231 = 11.145 (10.04)
X 212 = 9.258 (-8.60) X 222 = 10.243 (1.13) X 232 = 10.623 (4.89)

X 11 = 10.485 (3.52) X 12 = 10.192 (0.63) X 13 = 10.406 (2.74)
X 14 = 10.216 (0.87) X 15 = 9.490 (-6.30) X 16 = 9.980 (-1.46)

X m1 = 9.868 (-2.57) X m2 = 9.890 (-2.35) X m3 = 10.209 (0.79)
X m4 = 10.249 (1.19) X m5 = 10.080 (-0.47) X m6 = 10.473 (3.40)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.05652E+00 (10.1)	1.23857E+00 (11.0)	1.16109E+00 (10.6)
VR2 (cv2%)	4.97837E-01 (7.0)	2.47515E-01 (4.9)	
VR3 (cv3%)	4.65815E-01 (6.7)	5.15879E-01 (7.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.85675E+00	6.41677E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.004 (0.051)	0.003 (0.047)	0.004 (0.048)
- DOSE	14.654 (1.000)	12.500 (1.000)	13.334 (1.000)
- AMENDEMENT*DOSE	1.419 (0.740)	1.211 (0.685)	1.292 (0.703)
- SUBSIDIAIRE	0.100 (0.239)	0.201 (0.326)	
- AMENDEMENT*SUBSIDIAIRE	2.262 (0.858)	2.042 (0.838)	
- DOSE*SUBSIDIAIRE	0.367 (0.298)	0.331 (0.274)	
- AMENDEM*DOSE*SUBSID	0.449 (0.352)	0.406 (0.324)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.006 (0.063)	0.005 (0.060)	
- DOSE	21.952 (1.000)	19.897 (1.000)	
- AMENDEMENT*DOSE	2.126 (0.872)	1.927 (0.846)	
- SUBSIDIAIRE	0.070 (0.212)	0.064 (0.203)	
- AMENDEMENT*SUBSIDIAIRE	1.494 (0.775)	1.354 (0.751)	
- DOSE*SUBSIDIAIRE	0.242 (0.211)	0.219 (0.194)	
- AMENDEM*DOSE*SUBSID	0.297 (0.251)	0.269 (0.231)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :QN-GR unite : g/m2

DONNEES :

DDL = 20 NI = 12 SE = 1.161

4 T = 9.201
8 T = 10.573
12 T = 10.611

RESULTATS :

		1 4 T	2 8 T	3 12 T
1	4 T		++	+
2	8 T			
3	12 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QP-GR
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.466	2.009	1.904	1.687	1.749	1.648	1.887	1.801	1.657	1.652	1.581	1.661
X 12k	2.033	2.247	2.140	1.900	2.090	2.731	2.085	1.897	1.678	1.710	2.100	2.138
X 13k	2.193	2.243	2.244	2.171	2.002	1.973	1.953	2.190	1.793	1.704	1.759	1.708
X 21k	1.957	1.761	1.688	1.776	1.876	1.702	1.531	1.761	1.542	1.451	1.846	1.937
X 22k	2.382	2.159	2.000	2.018	1.946	2.086	1.721	1.766	2.003	1.916	2.097	1.978
X 23k	2.314	2.384	2.239	2.081	2.080	2.078	2.138	2.117	2.224	1.882	1.980	1.975

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.941

X 1.. = 1.927 (-0.72) X 2..= 1.955 (0.72)

X .1. = 1.731 (-10.86) X .2. = 2.034 (4.78) X .3. = 2.059 (6.08)

X ..1 = 1.941 (-0.02) X ..2 = 1.942 (0.02)

X 11. = 1.725 (-11.13) X 12. = 2.062 (6.23) X 13. = 1.994 (2.73)
X 21. = 1.736 (-10.59) X 22. = 2.006 (3.33) X 23. = 2.124 (9.42)

X 1.1 = 1.906 (-1.80) X 1.2 = 1.948 (0.36) X 2.1 = 1.976 (1.77) X 2.2 = 1.935 (-0.33)

X .11 = 1.724 (-11.21) X .12 = 1.737 (-10.51)
X .21 = 2.023 (4.20) X .22 = 2.045 (5.36)
X .31 = 2.077 (6.96) X .32 = 2.042 (5.19)

X 111 = 1.707 (-12.05) X 121 = 2.021 (4.11) X 131 = 1.991 (2.54)
X 112 = 1.743 (-10.21) X 122 = 2.104 (8.36) X 132 = 1.998 (2.93)
X 211 = 1.740 (-10.37) X 221 = 2.025 (4.30) X 231 = 2.162 (11.39)
X 212 = 1.732 (-10.81) X 222 = 1.987 (2.36) X 232 = 2.086 (7.46)

X 11 = 2.096 (7.95) X 12 = 1.987 (2.37) X 13 = 1.997 (2.87)
X 14 = 1.904 (-1.92) X 15 = 1.768 (-8.95) X 16 = 1.897 (-2.31)

X m1 = 1.978 (1.88) X m2 = 1.851 (-4.66) X m3 = 1.914 (-1.41)
X m4 = 1.980 (1.99) X m5 = 1.933 (-0.45) X m6 = 1.993 (2.66)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.94835E-02 (10.2)	6.25943E-02 (12.9)	4.06625E-02 (10.4)
VR2 (cv2%)	1.93317E-02 (7.2)	1.81043E-02 (6.9)	
VR3 (cv3%)	2.18813E-02 (7.6)	2.21268E-02 (7.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.22059E+00	6.82184E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.357 (0.438)	0.225 (0.356)	0.346 (0.431)
- DOSE	20.358 (1.000)	12.842 (1.000)	19.768 (1.000)
- AMENDEMENT*DOSE	1.353 (0.724)	0.854 (0.441)	1.314 (0.709)
- SUBSIDIAIRE	0.000 (0.016)	0.000 (0.016)	
- AMENDEMENT*SUBSIDIAIRE	1.410 (0.755)	1.394 (0.753)	
- DOSE*SUBSIDIAIRE	0.256 (0.221)	0.254 (0.219)	
- AMENDEM*DOSE*SUBSID	0.099 (0.095)	0.098 (0.094)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.491 (0.494)	0.371 (0.448)	
- DOSE	28.039 (1.000)	21.202 (1.000)	
- AMENDEMENT*DOSE	1.864 (0.836)	1.409 (0.747)	
- SUBSIDIAIRE	0.000 (0.015)	0.000 (0.013)	
- AMENDEMENT*SUBSIDIAIRE	1.076 (0.695)	0.814 (0.375)	
- DOSE*SUBSIDIAIRE	0.196 (0.176)	0.148 (0.137)	
- AMENDEM*DOSE*SUBSID	0.076 (0.073)	0.057 (0.056)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :BP-GR unite : g/m2

DONNEES :

DDL = 20 NI = 12 SE = 0.041

4 T = 1.731
8 T = 2.034
12 T = 2.059

RESULTATS :

		1 4 T	2 8 T	3 12 T
1	4 T		++	++
2	8 T			
3	12 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: GK-GR
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.177	3.044	2.949	2.450	2.539	2.286	2.579	2.462	2.485	2.478	2.244	2.233
X 12k	2.859	3.041	2.830	2.817	2.967	3.755	2.868	2.753	2.372	2.372	2.822	2.672
X 13k	2.990	3.154	3.156	3.112	2.777	2.631	2.626	2.920	2.523	2.524	2.512	2.531
X 21k	2.727	2.562	2.678	2.664	2.564	2.326	2.025	2.430	2.289	2.177	2.606	2.603
X 22k	3.275	3.064	2.758	3.027	2.700	2.961	2.459	2.564	2.489	2.535	2.818	2.616
X 23k	3.226	3.251	3.009	2.982	3.120	2.950	2.851	3.035	3.261	2.957	2.722	2.548

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.727

X 1.. = 2.709 (-0.67) X 2..= 2.745 (0.67)

X .1. = 2.482 (-8.97) X .2. = 2.808 (2.97) X .3. = 2.890 (6.00)

X ..1 = 2.718 (-0.32) X ..2 = 2.736 (0.32)

X 11. = 2.494 (-8.55) X 12. = 2.844 (4.29) X 13. = 2.788 (2.25)
X 21. = 2.471 (-9.39) X 22. = 2.772 (1.65) X 23. = 2.993 (9.75)

X 1.1 = 2.682 (-1.65) X 1.2 = 2.735 (0.30) X 2.1 = 2.754 (1.00) X 2.2 = 2.736 (0.34)

X .11 = 2.489 (-8.74) X .12 = 2.476 (-9.20)
X .21 = 2.768 (1.51) X .22 = 2.848 (4.44)
X .31 = 2.898 (6.27) X .32 = 2.883 (5.72)

X 111 = 2.496 (-8.48) X 121 = 2.786 (2.18) X 131 = 2.764 (1.37)
X 112 = 2.492 (-8.62) X 122 = 2.902 (6.41) X 132 = 2.812 (3.12)
X 211 = 2.481 (-9.00) X 221 = 2.750 (0.83) X 231 = 3.032 (11.17)
X 212 = 2.460 (-9.78) X 222 = 2.794 (2.47) X 232 = 2.954 (8.32)

X 11 = 2.948 (8.09) X 12 = 2.869 (5.22) X 13 = 2.798 (2.61)
X 14 = 2.631 (-3.52) X 15 = 2.538 (-6.91) X 16 = 2.577 (-5.49)

X m1 = 2.784 (2.11) X m2 = 2.631 (-3.51) X m3 = 2.703 (-0.88)
X m4 = 2.745 (0.68) X m5 = 2.681 (-1.69) X m6 = 2.817 (3.30)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	6.94567E-02 (9.7)	1.25928E-01 (13.0)	7.26848E-02 (9.9)
VR2 (cv2%)	3.04103E-02 (6.4)	4.97820E-02 (8.2)	
VR3 (cv3%)	4.28720E-02 (7.6)	3.89977E-02 (7.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.88309E+00	7.59146E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.346 (0.432)	0.191 (0.331)	0.331 (0.422)
- DOSE	16.090 (1.000)	8.874 (0.999)	15.375 (1.000)
- AMENDEMENT*DOSE	1.880 (0.828)	1.037 (0.629)	1.796 (0.810)
- SUBSIDIAIRE	0.182 (0.313)	0.111 (0.252)	
- AMENDEMENT*SUBSIDIAIRE	0.532 (0.479)	0.585 (0.458)	
- DOSE*SUBSIDIAIRE	0.410 (0.327)	0.450 (0.352)	
- AMENDEM*DOSE*SUBSID	0.102 (0.097)	0.112 (0.106)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.460 (0.492)	0.322 (0.420)	
- DOSE	21.384 (1.000)	14.931 (1.000)	
- AMENDEMENT*DOSE	2.498 (0.909)	1.744 (0.817)	
- SUBSIDIAIRE	0.106 (0.255)	0.074 (0.217)	
- AMENDEMENT*SUBSIDIAIRE	0.437 (0.481)	0.305 (0.410)	
- DOSE*SUBSIDIAIRE	0.336 (0.279)	0.235 (0.206)	
- AMENDEM*DOSE*SUBSID	0.084 (0.080)	0.058 (0.057)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :QK-GR unite : g/m2

DONNEES :

DDL = 20 NI = 12 SE = 0.073

4 T = 2.482
8 T = 2.808
12 T = 2.890

RESULTATS :

		1 4 T	2 8 T	3 12 T
1	4 T		++	++
2	8 T			
3	12 T			

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QMG-GR
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.622	0.791	0.799	0.762	0.846	0.851	0.881	0.901	0.773	0.771	0.765	0.779
X 12k	0.826	0.925	0.828	0.852	0.944	1.280	0.978	0.918	0.810	0.772	0.984	1.002
X 13k	0.864	0.911	0.982	0.941	0.969	0.897	0.943	1.022	0.863	0.883	0.879	0.886
X 21k	0.830	0.801	0.757	0.770	0.876	0.794	0.691	0.850	0.697	0.677	0.869	0.847
X 22k	0.968	0.905	0.896	0.820	0.942	1.009	0.799	0.855	0.910	0.865	0.983	0.893
X 23k	0.912	1.012	0.910	0.832	0.901	0.804	0.998	0.988	1.038	0.941	0.928	0.892

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.877

X 1.. = 0.881 (0.38) X 2..= 0.874 (-0.38)

X .1. = 0.792 (-9.76) X .2. = 0.915 (4.33) X .3. = 0.925 (5.42)

X ..1 = 0.874 (-0.38) X ..2 = 0.881 (0.38)

X 11. = 0.795 (-9.37) X 12. = 0.927 (5.63) X 13. = 0.920 (4.88)
X 21. = 0.788 (-10.15) X 22. = 0.904 (3.03) X 23. = 0.930 (5.97)

X 1.1 = 0.864 (-1.48) X 1.2 = 0.897 (2.24) X 2.1 = 0.884 (0.72) X 2.2 = 0.864 (-1.48)

X .11 = 0.784 (-10.66) X .12 = 0.800 (-8.86)
X .21 = 0.906 (3.25) X .22 = 0.925 (5.42)
X .31 = 0.932 (6.26) X .32 = 0.917 (4.58)

X 111 = 0.781 (-10.97) X 121 = 0.895 (2.03) X 131 = 0.917 (4.49)
X 112 = 0.809 (-7.77) X 122 = 0.958 (9.23) X 132 = 0.923 (5.26)
X 211 = 0.787 (-10.34) X 221 = 0.916 (4.46) X 231 = 0.948 (8.03)
X 212 = 0.790 (-9.95) X 222 = 0.891 (1.60) X 232 = 0.912 (3.91)

X 11 = 0.864 (-1.52) X 12 = 0.846 (-3.60) X 13 = 0.926 (5.58)
X 14 = 0.902 (2.81) X 15 = 0.833 (-4.99) X 16 = 0.892 (1.72)

X m1 = 0.869 (-0.92) X m2 = 0.846 (-3.53) X m3 = 0.882 (0.54)
X m4 = 0.902 (2.78) X m5 = 0.866 (-1.26) X m6 = 0.898 (2.40)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	9.14016E-03 (10.9)	1.11163E-02 (12.0)	1.00989E-02 (11.5)
VR2 (cv2%)	4.37666E-03 (7.5)	2.86324E-03 (6.1)	
VR3 (cv3%)	3.76191E-03 (7.0)	4.06460E-03 (7.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.41953E+00	6.79736E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.088 (0.233)	0.072 (0.213)	0.079 (0.223)
- DOSE	14.487 (1.000)	11.912 (1.000)	13.112 (1.000)
- AMENDEMENT*DOSE	0.172 (0.156)	0.141 (0.131)	0.156 (0.143)
- SUBSIDIAIRE	0.184 (0.314)	0.281 (0.379)	
- AMENDEMENT*SUBSIDIAIRE	3.226 (0.919)	2.986 (0.907)	
- DOSE*SUBSIDIAIRE	0.553 (0.413)	0.512 (0.389)	
- AMENDEM*DOSE*SUBSID	0.427 (0.338)	0.396 (0.318)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.134 (0.283)	0.118 (0.268)	
- DOSE	22.163 (1.000)	19.573 (1.000)	
- AMENDEMENT*DOSE	0.263 (0.227)	0.232 (0.204)	
- SUBSIDIAIRE	0.135 (0.284)	0.119 (0.269)	
- AMENDEMENT*SUBSIDIAIRE	2.031 (0.843)	1.794 (0.817)	
- DOSE*SUBSIDIAIRE	0.348 (0.287)	0.308 (0.259)	
- AMENDEM*DOSE*SUBSID	0.269 (0.231)	0.238 (0.208)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :QMG-GR unite : g/m2

DONNEES :

DDL = 20 NI = 12 SE = 0.010

4 T = 0.792
8 T = 0.915
12 T = 0.925

RESULTATS :

		1 4 T	2 8 T	3 12 T
1	4 T		++	+
2	8 T	.		
3	12 T			

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE SAC DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 17/12/84
parametre: PTTR
unite : g.pot

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	176.333	124.129	123.517	126.377	174.367	170.762	113.766	138.305	132.952	109.255	130.514	146.577
X 12k	126.268	138.452	119.622	129.466	151.172	123.912	137.039	154.551	129.229	111.700	137.177	129.736
X 13k	126.345	139.783	171.567	143.503	137.227	121.460	123.409	123.260	97.986	90.366	135.271	114.477
X 21k	143.111	116.071	155.911	147.349	128.398	150.443	157.633	128.552	123.741	119.135	116.139	166.877
X 22k	128.992	141.734	113.582	120.245	114.228	144.172	140.663	159.920	151.222	154.555	152.199	144.474
X 23k	129.987	132.212	129.404	132.495	157.50[illegible]	111.406	122.734	108.144	119.773	88.96[illegible]	116.309	123.254

2 - MOYENNES ET ECARTS RELATIFS

X ... = 131.672

X 1.. = 128.856 (-2.16) X 2..= 134.508 (2.16)

X .1. = 135.176 (2.61) X .2. = 137.292 (4.25) X .3. = 122.667 (-6.86)

X ..1 = 133.722 (1.54) X ..2 = 129.665 (-1.54)

X 11. = 132.346 (0.47) X 12. = 132.331 (0.48) X 13. = 121.898 (-7.44)
X 21. = 137.926 (4.73) X 22. = 142.253 (8.01) X 23. = 123.436 (-6.27)

X 1.1 = 131.676 (-0.02) X 1.2 = 126.041 (-4.30) X 2.1 = 135.788 (3.11) X 2.2 = 133.289 (1.21)

X .11 = 136.516 (3.66) X .12 = 133.756 (1.56)
X .21 = 136.366 (3.92) X .22 = 137.718 (4.57)
X .31 = 127.813 (-2.95) X .32 = 117.520 (-10.77)

X 111 = 125.275 (2.72) X 121 = 123.418 (1.31) X 131 = 126.034 (-4.37
X 112 = 129.417 (-1.73) X 122 = 131.245 (-0.34) X 132 = 117.461 (-11.81)
X 211 = 137.757 (4.60) X 221 = 140.314 (6.54) X 231 = 129.292 (-1.57.
X 212 = 138.095 (4.86) X 222 = 144.192 (9.49) X 232 = 117.550 (-10.72.

X 11 = 132.778 (0.82) X 12 = 134.037 (2.35) X 13 = 130.515 (1.78.
X 14 = 133.816 (1.61) X 15 = 123.098 (-6.60) X 16 = 132.675 (0.74.

X m. = 150.457 (14.24 X m2 = 129.131 (-1.84) X m3 = 129.786 (-1.76)
X m4 = 127.779 (-2.73) X m5 = 126.345 (-3.68) X m6 = 126.440 (-3.77)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.54795E+02 (16.2)	3.92187E+02 (17.0)	3.10729E+02 (13.4)
VR2 (cv2%)	3.84957E+02 (14.9)	2.85092E+02 (12.9)	
VR3 (cv3%)	2.58368E+02 (12.2)	2.77681E+02 (12.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.74015E-00	1.58675E-02	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.277 (0.731)	1.981 (0.832)	1.869 (0.816)
- DOSE	3.290 (0.947)	5.105 (0.986)	4.815 (0.983)
- AMENDEMENT*DOSE	0.232 (0.203)	0.360 (0.294)	0.339 (0.279)
- SUBSIDIAIRE	0.773 (0.423)	1.033 (0.642)	
- AMENDEMENT*SUBSIDIAIRE	0.171 (0.315)	0.159 (0.305)	
- DOSE*SUBSIDIAIRE	0.751 (0.486)	0.699 (0.489)	
- AMENDEM*DOSE*SUBSID	0.156 (0.143)	0.145 (0.134)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.661 (0.799)	2.039 (0.844)	
- DOSE	4.290 (0.981)	5.252 (0.991)	
- AMENDEMENT*DOSE	0.302 (0.255)	0.370 (0.302)	
- SUBSIDIAIRE	0.952 (0.363)	1.045 (0.698)	
- AMENDEMENT*SUBSIDIAIRE	0.127 (0.276)	0.155 (0.303)	
- DOSE*SUBSIDIAIRE	0.555 (0.417)	0.681 (0.485)	
- AMENDEM*DOSE*SUBSID	0.115 (0.109)	0.141 (0.131)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.720	0.800	0.900	0.720	0.850	0.870	0.920	0.800	0.800	0.750	1.050	1.050
X 12k	0.850	1.020	0.900	0.920	0.770	1.000	0.970	0.800	0.950	0.770	0.670	0.800
X 13k	0.670	0.820	0.770	0.770	0.820	0.750	0.850	0.800	0.720	0.650	0.620	0.750
X 21k	0.720	0.820	0.950	0.750	0.900	0.820	0.870	0.850	0.950	1.050	0.850	0.850
X 22k	0.750	0.720	0.800	0.820	0.900	1.000	0.950	0.870	0.970	0.800	0.700	0.770
X 23k	0.750	0.750	0.850	0.700	0.850	0.900	0.800	0.770	0.800	0.820	0.800	0.770

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.828

X 1.. = 0.823 (-0.59) X 2..= 0.833 (0.59)

X .1. = 0.859 (3.69) X .2. = 0.853 (2.99) X .3. = 0.773 (-6.67)

X ..1 = 0.832 (0.49) X ..2 = 0.824 (-0.49)

X 11. = 0.852 (2.93) X 12. = 0.868 (4.85) X 13. = 0.749 (-9.54)
X 21. = 0.865 (4.44) X 22. = 0.838 (1.12) X 23. = 0.797 (-3.81)

X 1.1 = 0.822 (-0.72) X 1.2 = 0.824 (-0.45) X 2.1 = 0.842 (1.69) X 2.2 = 0.824 (-0.52)

X .11 = 0.873 (5.45) X .12 = 0.844 (1.93)
X .21 = 0.848 (2.43) X .22 = 0.857 (3.54)
X .31 = 0.775 (-6.42) X .32 = 0.771 (-6.93)

X 111 = 0.873 (5.45) X 121 = 0.852 (2.83) X 131 = 0.742 (-10.45)
X 112 = 0.832 (0.42) X 122 = 0.885 (6.86) X 132 = 0.757 (-8.64)
X 211 = 0.873 (5.45) X 221 = 0.845 (2.03) X 231 = 0.808 (-2.40)
X 212 = 0.857 (3.44) X 222 = 0.830 (0.22) X 232 = 0.785 (-5.22)

X 11 = 0.783 (-5.52) X 12 = 0.821 (-0.89) X 13 = 0.869 (4.95)
X 14 = 0.854 (3.14) X 15 = 0.836 (0.92) X 16 = 0.807 (-2.60)

X ■1 = 0.838 (1.12) X ■2 = 0.813 (-1.90) X ■3 = 0.808 (-2.40)
X ■4 = 0.805 (-2.80) X ■5 = 0.846 (2.13) X ■6 = 0.860 (3.84)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.15687E-02 (13.0)	1.27347E-02 (13.6)	1.29081E-02 (13.7)
VR2 (cv2%)	1.57147E-02 (15.1)	6.11806E-03 (9.4)	
VR3 (cv3%)	4.63672E-03 (8.2)	6.55606E-03 (9.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	5.75676E+00	2.69676E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.147 (0.294)	0.134 (0.282)	0.132 (0.279)
- DOSE	4.772 (0.983)	4.335 (0.976)	4.277 (0.975)
- AMENDEMENT*DOSE	0.799 (0.465)	0.725 (0.498)	0.716 (0.495)
- SUBSIDIAIRE	0.077 (0.210)	0.191 (0.319)	
- AMENDEMENT*SUBSIDIAIRE	0.410 (0.466)	0.290 (0.399)	
- DOSE*SUBSIDIAIRE	0.490 (0.376)	0.347 (0.285)	
- AMENDEM*DOSE*SUBSID	0.512 (0.389)	0.362 (0.295)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.200 (0.339)	0.189 (0.331)	
- DOSE	6.482 (0.997)	6.145 (0.996)	
- AMENDEMENT*DOSE	1.085 (0.653)	1.028 (0.634)	
- SUBSIDIAIRE	0.137 (0.286)	0.130 (0.279)	
- AMENDEMENT*SUBSIDIAIRE	0.223 (0.356)	0.212 (0.348)	
- DOSE*SUBSIDIAIRE	0.267 (0.230)	0.253 (0.219)	
- AMENDEM*DOSE*SUBSID	0.279 (0.238)	0.264 (0.228)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.100	0.090	0.130	0.080	0.140	0.090	0.100	0.090	0.110	0.090	0.150	0.130
X 12k	0.120	0.150	0.100	0.090	0.100	0.140	0.120	0.090	0.120	0.100	0.090	0.090
X 13k	0.080	0.070	0.070	0.110	0.080	0.090	0.080	0.080	0.060	0.060	0.050	0.080
X 21k	0.090	0.110	0.140	0.070	0.090	0.090	0.100	0.070	0.110	0.150	0.110	0.110
X 22k	0.110	0.080	0.100	0.130	0.110	0.130	0.100	0.120	0.150	0.110	0.070	0.100
X 23k	0.100	0.100	0.090	0.060	0.080	0.080	0.070	0.080	0.100	0.090	0.060	0.080

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.098

X 1.. = 0.098 (-0.28) X 2..= 0.098 (0.28)

X .1. = 0.106 (7.93) X .2. = 0.109 (11.33) X .3. = 0.079 (-19.26)

X ..1 = 0.099 (1.42) X ..2 = 0.097 (-1.42)

X 11. = 0.108 (10.48) X 12. = 0.109 (11.33) X 13. = 0.076 (-22.66)
X 21. = 0.103 (5.38) X 22. = 0.109 (11.33) X 23. = 0.083 (-15.86)

X 1.1 = 0.100 (1.98) X 1.2 = 0.096 (-2.55) X 2.1 = 0.099 (0.85) X 2.2 = 0.098 (-0.28)

X .11 = 0.114 (16.43) X .12 = 0.098 (-0.57)
X .21 = 0.107 (9.63) X .22 = 0.111 (13.03)
X .31 = 0.077 (-21.81) X .32 = 0.082 (-16.71)

X 111 = 0.122 (24.08) X 121 = 0.108 (10.48) X 131 = 0.070 (-28.61)
X 112 = 0.095 (-3.12) X 122 = 0.110 (12.18) X 132 = 0.082 (-16.71)
X 211 = 0.107 (8.78) X 221 = 0.107 (8.78) X 231 = 0.083 (-15.01)
X 212 = 0.100 (1.98) X 222 = 0.112 (13.88) X 232 = 0.082 (-16.71)

X 11 = 0.100 (1.98) X 12 = 0.098 (-0.57) X 13 = 0.102 (3.68)
X 14 = 0.092 (-6.52) X 15 = 0.104 (6.23) X 16 = 0.093 (-4.82)

X ■1 = 0.102 (3.68) X ■2 = 0.097 (-1.42) X ■3 = 0.096 (-2.27)
X ■4 = 0.094 (-3.97) X ■5 = 0.095 (-3.12) X ■6 = 0.105 (7.08)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.96889E-04 (22.7)	5.08889E-04 (23.0)	5.65556E-04 (24.3)
VR2 (cv2%)	2.42222E-04 (15.9)	5.55556E-05 (7.6)	
VR3 (cv3%)	3.80889E-04 (19.9)	4.18222E-04 (20.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	9.99207E-01	5.90317E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.011 (0.087)	0.011 (0.086)	0.010 (0.081)
- DOSE	13.059 (1.000)	12.751 (1.000)	11.473 (1.000)
- AMENDEMENT*DOSE	0.414 (0.329)	0.404 (0.323)	0.363 (0.296)
- SUBSIDIAIRE	0.573 (0.487)	2.500 (0.827)	
- AMENDEMENT*SUBSIDIAIRE	0.131 (0.280)	0.120 (0.268)	
- DOSE*SUBSIDIAIRE	2.290 (0.880)	2.086 (0.856)	
- AMENDEM*DOSE*SUBSID	1.094 (0.649)	0.996 (0.385)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.013 (0.096)	0.013 (0.095)	
- DOSE	15.696 (1.000)	15.515 (1.000)	
- AMENDEMENT*DOSE	0.497 (0.383)	0.491 (0.380)	
- SUBSIDIAIRE	0.336 (0.428)	0.332 (0.426)	
- AMENDEMENT*SUBSIDIAIRE	0.121 (0.271)	0.120 (0.269)	
- DOSE*SUBSIDIAIRE	2.110 (0.870)	2.086 (0.867)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :P205TF unite : %

DONNEES :

DDL = 20 NI = 12 SE = 0.001

4 T = 0.106
8 T = 0.109
12 T = 0.079

RESULTATS :

		1 12 T	2 4 T	3 8 T
1	12 T		+	+
2	4 T			
3	8 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: KTF
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.240	2.070	1.540	1.300	1.380	1.300	1.600	1.430	1.160	1.110	1.160	1.140
X 12k	1.610	1.360	1.300	1.310	1.360	1.150	1.410	1.180	0.860	1.200	1.450	1.300
X 13k	1.300	1.540	1.380	1.480	1.110	1.180	1.500	1.200	1.510	1.340	1.280	1.210
X 21k	1.430	1.130	1.450	1.080	1.330	1.250	1.280	1.500	1.130	1.160	1.230	1.110
X 22k	1.450	1.230	1.530	1.200	1.380	1.000	1.430	1.200	0.930	1.130	1.300	1.430
X 23k	1.030	1.030	1.330	1.200	1.450	1.350	1.700	1.480	1.130	1.200	1.550	1.630

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.310

X 1.. = 1.332 (1.68) X 2..= 1.288 (-1.68)

X .1. = 1.313 (0.22) X .2. = 1.279 (-2.35) X .3. = 1.338 (2.13)

X ..1 = 1.339 (2.23) X ..2 = 1.281 (-2.23)

X 11. = 1.369 (4.52) X 12. = 1.291 (-1.46) X 13. = 1.336 (1.97)
X 21. = 1.257 (-4.07) X 22. = 1.267 (-3.24) X 23. = 1.340 (2.29)

X 1.1 = 1.342 (2.42) X 1.2 = 1.322 (0.93) X 2.1 = 1.337 (2.04) X 2.2 = 1.239 (-5.39)

X .11 = 1.327 (1.34) X .12 = 1.298 (-0.89)
X .21 = 1.334 (1.84) X .22 = 1.224 (-6.55)
X .31 = 1.356 (3.50) X .32 = 1.320 (0.76)

X 111 = 1.347 (2.80) X 121 = 1.332 (1.65) X 131 = 1.347 (2.80)
X 112 = 1.392 (6.23) X 122 = 1.250 (-4.58) X 132 = 1.325 (1.15)
X 211 = 1.308 (-0.13) X 221 = 1.337 (2.04) X 231 = 1.365 (4.20)
X 212 = 1.205 (-8.02) X 222 = 1.198 (-8.52) X 232 = 1.315 (0.38)

X 11 = 1.368 (4.45) X 12 = 1.342 (2.42) X 13 = 1.270 (-3.05)
X 14 = 1.409 (7.57) X 15 = 1.155 (-11.83) X 16 = 1.316 (0.45)

X m1 = 1.330 (1.53) X m2 = 1.222 (-6.74) X m3 = 1.412 (7.76)
X m4 = 1.266 (-3.37) X m5 = 1.340 (2.29) X m6 = 1.291 (-1.46)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.33873E-02 (15.9)	5.20953E-02 (17.4)	4.11800E-02 (15.5)
VR2 (cv2%)	3.24800E-02 (13.8)	4.14067E-02 (15.5)	
VR3 (cv3%)	3.00027E-02 (13.2)	2.82173E-02 (12.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.50856E-01	2.02198E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.799 (0.384)	0.666 (0.428)	0.842 (0.373)
- DOSE	0.481 (0.371)	0.400 (0.321)	0.507 (0.386)
- AMENDEMENT*DOSE	0.514 (0.391)	0.428 (0.338)	0.542 (0.405)
- SUBSIDIAIRE	1.886 (0.773)	1.479 (0.722)	
- AMENDEMENT*SUBSIDIAIRE	0.907 (0.352)	0.965 (0.337)	
- DOSE*SUBSIDIAIRE	0.403 (0.322)	0.428 (0.338)	
- AMENDEM*DOSE*SUBSID	0.197 (0.176)	0.209 (0.186)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.974 (0.330)	0.887 (0.353)	
- DOSE	0.586 (0.435)	0.534 (0.405)	
- AMENDEMENT*DOSE	0.627 (0.457)	0.571 (0.426)	
- SUBSIDIAIRE	1.720 (0.807)	1.567 (0.786)	
- AMENDEMENT*SUBSIDIAIRE	0.765 (0.390)	0.696 (0.413)	
- DOSE*SUBSIDIAIRE	0.339 (0.281)	0.309 (0.260)	
- AMENDEM*DOSE*SUBSID	0.166 (0.151)	0.151 (0.139)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.100	0.100	0.110	0.090	0.130	0.120	0.130	0.130	0.070	0.060	0.100	0.110
X 12k	0.110	0.130	0.140	0.130	0.130	0.100	0.110	0.140	0.160	0.070	0.060	0.070
X 13k	0.100	0.110	0.150	0.120	0.140	0.130	0.160	0.150	0.120	0.110	0.070	0.150
X 21k	0.080	0.100	0.120	0.110	0.120	0.110	0.130	0.130	0.140	0.060	0.110	0.140
X 22k	0.120	0.090	0.110	0.130	0.150	0.130	0.160	0.120	0.180	0.180	0.090	0.080
X 23k	0.130	0.130	0.180	0.130	0.180	0.180	0.140	0.150	0.110	0.150	0.140	0.140

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.122

X 1.. = 0.114 (-6.16) X 2..= 0.129 (6.16)

X .1. = 0.108 (-10.96) X .2. = 0.120 (-1.03) X .3. = 0.136 (11.99)

X ..1 = 0.124 (2.28) X ..2 = 0.119 (-2.28)

X 11. = 0.104 (-14.38) X 12. = 0.112 (-7.53) X 13. = 0.126 (3.42)
X 21. = 0.113 (-7.53) X 22. = 0.128 (5.48) X 23. = 0.147 (20.55)

X 1.1 = 0.116 (-4.57) X 1.2 = 0.112 (-7.76) X 2.1 = 0.133 (9.13) X 2.2 = 0.126 (3.20)

X .11 = 0.112 (-8.22) X .12 = 0.105 (-13.70)
X .21 = 0.127 (4.11) X .22 = 0.114 (-6.16)
X .31 = 0.135 (10.96) X .32 = 0.137 (13.01)

X 111 = 0.107 (-12.33) X 121 = 0.118 (-2.74) X 131 = 0.123 (1.37)
X 112 = 0.102 (-16.44) X 122 = 0.107 (-12.33) X 132 = 0.128 (5.48)
X 211 = 0.117 (-4.11) X 221 = 0.135 (10.96) X 231 = 0.147 (20.55)
X 212 = 0.108 (-10.96) X 222 = 0.122 (0.00) X 232 = 0.147 (20.55)

X 11 = 0.108 (-10.96) X 12 = 0.127 (4.11) X 13 = 0.135 (10.96)
X 14 = 0.137 (13.01) X 15 = 0.117 (-3.42) X 16 = 0.105 (-13.70)

X ■1 = 0.141 (15.75) X ■2 = 0.118 (-2.74) X ■3 = 0.117 (-3.42)
X ■4 = 0.112 (-8.22) X ■5 = 0.124 (2.05) X ■6 = 0.117 (-3.42)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.22000E-04 (23.6)	1.01733E-03 (26.2)	7.15833E-04 (22.0)
VR2 (cv2%)	7.85556E-04 (23.0)	3.95556E-04 (16.3)	
VR3 (cv3%)	4.78889E-04 (18.0)	5.56889E-04 (19.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.67309E+00	2.72209E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	4.927 (0.966)	3.981 (0.946)	5.658 (0.974)
- DOSE	5.723 (0.991)	4.624 (0.981)	6.572 (0.995)
- AMENDEMENT*DOSE	0.289 (0.245)	0.233 (0.204)	0.332 (0.274)
- SUBSIDIAIRE	0.707 (0.443)	1.404 (0.711)	
- AMENDEMENT*SUBSIDIAIRE	0.104 (0.252)	0.090 (0.236)	
- DOSE*SUBSIDIAIRE	0.716 (0.498)	0.616 (0.447)	
- AMENDEM*DOSE*SUBSID	0.009 (0.008)	0.007 (0.007)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	6.262 (0.985)	5.587 (0.979)	
- DOSE	7.273 (0.998)	6.489 (0.997)	
- AMENDEMENT*DOSE	0.367 (0.300)	0.328 (0.273)	
- SUBSIDIAIRE	0.859 (0.361)	0.766 (0.390)	
- AMENDEMENT*SUBSIDIAIRE	0.077 (0.221)	0.069 (0.210)	
- DOSE*SUBSIDIAIRE	0.530 (0.403)	0.473 (0.369)	
- AMENDEM*DOSE*SUBSID	0.006 (0.006)	0.006 (0.005)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :CATF unite : %

DONNEES :

DDL = 20 NI = 12 SE = 0.001

4 T = 0.108
8 T = 0.120
12 T = 0.136

RESULTATS :

		1 4 T	2 8 T	3 12 T
1	4 T			+
2	8 T			
3	12 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: MGTF
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.640	0.490	0.720	0.590	0.710	0.700	0.640	0.680	0.620	0.560	0.860	0.770
X 12k	0.730	0.870	0.730	0.840	0.700	0.740	0.640	0.850	0.920	0.590	0.520	0.530
X 13k	0.740	0.870	0.660	0.650	0.730	0.670	0.700	0.730	0.640	0.590	0.550	0.630
X 21k	0.540	0.700	0.670	0.780	0.630	0.660	0.610	0.820	0.720	0.540	0.690	0.780
X 22k	0.610	0.570	0.630	0.740	0.740	0.750	0.800	0.640	0.780	0.700	0.530	0.480
X 23k	0.680	0.680	0.800	0.700	0.700	0.790	0.590	0.660	0.640	0.760	0.640	0.610

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.683

X 1.. = 0.689 (0.90) X 2..= 0.677 (-0.90)

X .1. = 0.672 (-1.63) X .2. = 0.693 (1.48) X .3. = 0.684 (0.14)

X ..1 = 0.679 (-0.53) X ..2 = 0.686 (0.53)

X 11. = 0.665 (-2.60) X 12. = 0.722 (5.70) X 13. = 0.680 (-0.41)
X 21. = 0.678 (-0.65) X 22. = 0.664 (-2.73) X 23. = 0.688 (0.69)

X 1.1 = 0.692 (1.30) X 1.2 = 0.686 (0.49) X 2.1 = 0.667 (-2.36) X 2.2 = 0.687 (0.57)

X .11 = 0.671 (-1.75) X .12 = 0.673 (-1.51)
X .21 = 0.694 (1.67) X .22 = 0.692 (1.30)
X .31 = 0.673 (-1.51) X .32 = 0.695 (1.79)

X 111 = 0.698 (2.28) X 121 = 0.707 (3.50) X 131 = 0.670 (-1.87)
X 112 = 0.632 (-7.49) X 122 = 0.737 (7.89) X 132 = 0.690 (1.06)
X 211 = 0.643 (-5.78) X 221 = 0.682 (-0.16) X 231 = 0.675 (-1.14)
X 212 = 0.713 (4.48) X 222 = 0.647 (-5.29) X 232 = 0.700 (2.52)

X 11 = 0.677 (-0.90) X 12 = 0.709 (3.86) X 13 = 0.710 (3.99)
X 14 = 0.697 (2.03) X 15 = 0.672 (-1.63) X 16 = 0.633 (-7.36)

X m1 = 0.698 (2.16) X m2 = 0.674 (-1.26) X m3 = 0.663 (-2.97)
X m4 = 0.658 (-3.70) X m5 = 0.665 (-2.60) X m6 = 0.740 (8.38)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.36089E-02 (17.1)	1.33149E-02 (16.9)	1.40522E-02 (17.4)
VR2 (cv2%)	9.34889E-03 (14.2)	1.02322E-02 (14.8)	
VR3 (cv3%)	6.21889E-03 (11.5)	6.04222E-03 (11.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.27299E+00	3.35171E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.198 (0.336)	0.202 (0.339)	0.191 (0.330)
- DOSE	0.200 (0.179)	0.205 (0.182)	0.194 (0.174)
- AMENDEMENT*DOSE	0.682 (0.481)	0.697 (0.488)	0.660 (0.468)
- SUBSIDIAIRE	0.100 (0.240)	0.092 (0.231)	
- AMENDEMENT*SUBSIDIAIRE	0.473 (0.495)	0.486 (0.499)	
- DOSE*SUBSIDIAIRE	0.173 (0.157)	0.178 (0.161)	
- AMENDEM*DOSE*SUBSID	2.529 (0.902)	2.603 (0.908)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.283 (0.397)	0.287 (0.399)	
- DOSE	0.287 (0.245)	0.291 (0.247)	
- AMENDEMENT*DOSE	0.978 (0.385)	0.990 (0.381)	
- SUBSIDIAIRE	0.099 (0.247)	0.100 (0.249)	
- AMENDEMENT*SUBSIDIAIRE	0.310 (0.413)	0.314 (0.415)	
- DOSE*SUBSIDIAIRE	0.113 (0.107)	0.115 (0.109)	
- AMENDEM*DOSE*SUBSID	1.658 (0.801)	1.678 (0.805)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.020	0.020	0.030	0.020	0.020	0.020	0.020	0.020	0.020	0.010	0.020	0.030
X 12k	0.020	0.020	0.030	0.020	0.020	0.020	0.020	0.030	0.020	0.020	0.010	0.010
X 13k	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.010	0.020
X 21k	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.030	0.020	0.020	0.030
X 22k	0.020	0.020	0.020	0.020	0.030	0.020	0.030	0.020	0.040	0.030	0.020	0.010
X 23k	0.020	0.020	0.030	0.020	0.020	0.020	0.020	0.020	0.020	0.030	0.020	0.020

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.021

X 1.. = 0.020 (-5.26) X 2..= 0.022 (5.26)

X .1. = 0.021 (0.66) X .2. = 0.022 (2.63) X .3. = 0.020 (-3.29)

X ..1 = 0.022 (2.63) X ..2 = 0.021 (-2.63)

X 11. = 0.021 (-1.32) X 12. = 0.020 (-5.26) X 13. = 0.019 (-9.21)
X 21. = 0.022 (2.63) X 22. = 0.023 (10.53) X 23. = 0.022 (2.63)

X 1.1 = 0.020 (-5.26) X 1.2 = 0.020 (-5.26) X 2.1 = 0.023 (10.53) X 2.2 = 0.021 (-0.00)

X .11 = 0.022 (2.63) X .12 = 0.021 (-1.32)
X .21 = 0.023 (10.53) X .22 = 0.020 (-5.26)
X .31 = 0.020 (-5.26) X .32 = 0.021 (-1.32)

X 111 = 0.022 (2.63) X 121 = 0.020 (-5.26) X 131 = 0.018 (-13.16)
X 112 = 0.020 (-5.26) X 122 = 0.020 (-5.26) X 132 = 0.020 (-5.26)
X 211 = 0.022 (2.63) X 221 = 0.027 (26.32) X 231 = 0.022 (2.63)
X 212 = 0.022 (2.63) X 222 = 0.020 (-5.26) X 232 = 0.022 (2.63)

X L1 = 0.020 (-5.26) X L2 = 0.023 (6.58) X L3 = 0.021 (-1.32)
X L4 = 0.022 (2.63) X L5 = 0.023 (10.53) X L6 = 0.018 (-13.16)

X M1 = 0.024 (14.47) X M2 = 0.021 (-1.32) X M3 = 0.019 (-9.21)
X M4 = 0.019 (-9.21) X M5 = 0.022 (2.63) X M6 = 0.022 (2.63)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (1/4%)	3.55556E-05 (29.2)	3.49689E-05 (28.0)	3.39689E-05 (27.6)
VR2 (1/2%)	2.55556E-05 (20.9)	2.88889E-05 (23.5)	
VR3 (1/3%)	1.88889E-05 (19.5)	1.62222E-05 (19.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.98045E+00	3.19102E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.500 (0.877)	2.549 (0.881)	2.623 (0.882)
- DOSE	0.273 (0.234)	0.279 (0.237)	0.287 (0.243)
- AMENDEMENT*DOSE	0.273 (0.234)	0.279 (0.237)	0.287 (0.243)
- SUBSIDIAIRE	0.870 (0.397)	0.769 (0.424)	
- AMENDEMENT*SUBSIDIAIRE	1.316 (0.739)	1.370 (0.748)	
- DOSE*SUBSIDIAIRE	1.563 (0.772)	1.627 (0.785)	
- AMENDEM*DOSE*SUBSID	1.563 (0.772)	1.627 (0.785)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.524 (0.937)	3.562 (0.938)	
- DOSE	0.385 (0.313)	0.390 (0.315)	
- AMENDEMENT*DOSE	0.385 (0.313)	0.390 (0.315)	
- SUBSIDIAIRE	0.881 (0.355)	0.890 (0.352)	
- AMENDEMENT*SUBSIDIAIRE	0.881 (0.355)	0.890 (0.352)	
- DOSE*SUBSIDIAIRE	1.046 (0.640)	1.057 (0.644)	
- AMENDEM*DOSE*SUBSID	1.046 (0.640)	1.057 (0.644)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

année: 1984 — date : 84 — parametre: MS/CAO — unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.400	4.900	6.545	6.556	5.462	5.833	4.923	5.231	8.857	9.333	8.600	7.000
X 12k	6.636	6.692	5.214	6.462	5.385	7.400	5.818	6.071	5.750	8.429	8.667	7.571
X 13k	7.400	7.909	4.400	5.417	5.214	5.154	4.375	4.867	5.333	5.364	7.857	4.200
X 21k	6.751	7.300	5.583	7.071	5.650	6.000	4.692	6.308	5.143	9.300	6.277	5.571
X 22k	5.382	6.333	5.727	5.692	4.933	5.769	5.000	5.333	4.333	3.889	5.889	6.000
X 23k	5.231	5.231	4.444	5.385	3.889	4.389	4.214	4.400	5.818	5.067	4.571	4.357

2 - MOYENNES ET ECARTS RELATIFS

X ... = 5.977

X 1.. = 6.312 (7.47) X 2.. = 5.434 (-7.47)

X .1. = 6.429 (9.47) X .2. = 6.003 (2.22) X .3. = 5.187 (-11.68)

X ..1 = 5.713 (-2.73) X ..2 = 6.033 (2.73)

X 11. = 6.637 (13.00) X 12. = 6.675 (13.65) X 13. = 5.624 (-4.24)
X 21. = 6.222 (5.94) X 22. = 5.332 (-9.21) X 23. = 4.750 (-19.13)

X 1.1 = 6.269 (6.74) X 1.2 = 6.355 (8.20) X 2.1 = 5.157 (-12.19) X 2.2 = 5.712 (-2.74)

X .11 = 6.207 (5.68) X .12 = 6.652 (13.26)
X .21 = 5.703 (-2.90) X .22 = 6.304 (7.33)
X .31 = 5.229 (-10.97) X .32 = 5.145 (-12.40)

X 111 = 6.798 (15.75) X 121 = 6.245 (6.33) X 131 = 5.763 (-1.87)
X 112 = 6.475 (10.26) X 122 = 7.104 (20.96) X 132 = 5.485 (-6.61)
X 211 = 5.615 (-4.39) X 221 = 5.161 (-12.12) X 231 = 4.695 (-20.07)
X 212 = 6.828 (16.26) X 222 = 5.503 (-6.30) X 232 = 4.805 (-18.19)

X L1 = 6.297 (7.22) X L2 = 5.710 (-2.78) X L3 = 5.390 (-8.23)
X L4 = 5.192 (-13.12) X L5 = 6.369 (8.58) X L6 = 6.390 (8.63)

X M1 = 5.117 (-12.95) X M2 = 5.948 (1.28) X M3 = 5.708 (-2.81)
X M4 = 6.496 (10.61) X M5 = 5.357 (-5.79) X M6 = 6.417 (9.25)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (1/1%)	1.42755E+00 (20.4)	1.50117E+00 (20.9)	9.60371E-01 (16.7)
VR2 (2/2%)	1.91357E+00 (23.6)	5.19632E-01 (12.7)	
VR3 (3/3%)	5.03491E-01 (12.1)	7.83279E-01 (15.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.23503E+00	3.26477E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	9.638 (0.995)	9.230 (0.994)	14.429 (0.999)
- DOSE	6.654 (0.995)	6.372 (0.994)	9.961 (0.999)
- AMENDEMENT*DOSE	0.898 (0.423)	0.860 (0.428)	1.343 (0.717)
- SUBSIDIAIRE	3.964 (0.373)	3.560 (0.584)	
- AMENDEMENT*SUBSIDIAIRE	1.964 (0.830)	1.263 (0.729)	
- DOSE*SUBSIDIAIRE	1.536 (0.766)	0.987 (0.389)	
- AMENDEM*DOSE*SUBSID	3.153 (0.941)	2.027 (0.849)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	13.602 (0.999)	13.271 (0.999)	
- DOSE	9.390 (0.999)	9.161 (0.999)	
- AMENDEMENT*DOSE	1.268 (0.710)	1.237 (0.701)	
- SUBSIDIAIRE	1.816 (0.819)	1.772 (0.814)	
- AMENDEMENT*SUBSIDIAIRE	0.971 (0.330)	0.947 (0.337)	
- DOSE*SUBSIDIAIRE	0.759 (0.478)	0.741 (0.486)	
- AMENDEM*DOSE*SUBSID	1.559 (0.781)	1.521 (0.773)	

PAGE DE INFLUENCE DE 3 DOSES DE DAP DE 2 AMENDEMENTS CALCIQUES DIFFERENTS — Date : 1984
JAPONAISE SUR UNE CULTURE DE MAIS SUR VERTISOL H.FERRAGINEUSE — Parcelle: Q*SP
Année:1984 — Suite : 1 c 2

. - DONNEES OBSERVEES

	Bloc 1		Bloc 2		Bloc 3		Bloc 4		Bloc 5		Bloc 6	
X 11k	1138.779	734.621	792.946	811.306	812.529	826.552	713.495	877.393	853.517	686.970	818.534	919.250
X 12k	775.785	954.644	762.035	805.565	963.024	777.126	927.131	969.286	784.944	681.540	860.322	939.604
X 13k	863.630	688.516	1050.585	921.251	842.125	693.564	725.221	762.689	614.527	597.961	686.211	717.956
X 21k	855.130	745.180	909.520	885.922	829.101	926.191	965.258	921.627	745.131	757.966	745.534	1029.875
X 22k	908.990	839.214	717.950	715.498	722.324	911.319	834.396	1.110.350	1129.632	954.041	954.529	906.386
X 23k	840.711	861.875	843.719	763.525	995.365	898.695	769.964	704.284	745.469	544.777	700.725	764.710

I - MOYENNES ET ECARTS RELATIFS

X ... = 822.608

X 1.. = 810.281 (-1.50) X 2.. = 874.934 (1.50)

X .1. = 845.091 (2.73) X .2. = 855.771 (4.03) X .3. = 766.961 (-6.76)

X ..1 = 835.599 (1.58) X ..2 = 809.617 (-1.58)

X 11. = 808.490 (1.69) X 12. = 830.084 (0.91) X 13. = 764.270 (-7.09)
X 21. = 853.693 (3.78) X 22. = 891.458 (7.15) X 23. = 769.652 (-6.44)

X 1.1 = 820.574 (0.97) X 1.2 = 799.988 (-3.97) X 2.1 = 840.623 (2.19) X 2.2 = 829.245 (0.81)

X .11 = 848.127 (3.10) X .12 = 842.056 (2.36)
X .21 = 851.729 (3.54) X .22 = 859.814 (4.52)
X .31 = 906.941 (-1.90) X .32 = 726.981 (-11.62)

X 111 = 854.967 (3.93) X 121 = 838.873 (1.98) X 131 = 797.883 (-3.01)
X 112 = 819.014 (-0.56) X 122 = 821.294 (-0.16) X 132 = 730.656 (-11.18)
X 211 = 841.289 (2.27) X 221 = 864.524 (5.10) X 231 = 815.999 (-0.80)
X 212 = 866.098 (5.29) X 222 = 898.333 (9.21) X 232 = 723.305 (-12.07)

X L1 = 839.334 (2.03) X L2 = 831.986 (1.14) X L3 = 874.560 (1.39)
X L4 = 842.623 (2.43) X L5 = 759.032 (-7.73) X L6 = 828.612 (0.73)

X M1 = 945.415 (14.93) X M2 = 817.240 (-0.65) X M3 = 797.600 (-3.04)
X M4 = 797.786 (-3.02) X M5 = 781.075 (-5.05) X M6 = 796.550 (-3.17)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (6.1%)	1.71774E+04 (15.9)	1.15197E+04 (12.5)	1.01327E+04 (12.3)
VR2 (6.2%)	1.29969E+04 (12.9)	1.22852E+04 (12.5)	
VR3 (6.3%)	9.28669E+03 (11.7)	5.42891E+03 (11.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.00907E+00	1.68776E-01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.639 (0.437)	1.040 (0.681)	1.076 (0.687)
- DOSE	3.293 (0.948)	5.764 (0.999)	5.552 (0.990)
- AMENDEMENT*DOSE	0.200 (0.178)	0.325 (0.270)	0.337 (0.278)
- SUBSIDIAIRE	0.935 (0.380)	0.969 (0.367)	
- AMENDEMENT*SUBSIDIAIRE	0.413 (0.467)	0.407 (0.464)	
- DOSE*SUBSIDIAIRE	1.444 (0.746)	1.422 (0.741)	
- AMENDEM*DOSE*SUBSID	0.367 (0.298)	0.361 (0.295)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.855 (0.362)	1.078 (0.695)	
- DOSE	4.409 (0.983)	5.558 (0.993)	
- AMENDEMENT*DOSE	0.267 (0.230)	0.337 (0.280)	
- SUBSIDIAIRE	0.950 (0.336)	1.197 (0.721)	
- AMENDEMENT*SUBSIDIAIRE	0.300 (0.407)	0.378 (0.452)	
- DOSE*SUBSIDIAIRE	1.048 (0.641)	1.321 (0.725)	
- AMENDEM*DOSE*SUBSID	0.266 (0.229)	0.335 (0.278)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	8.179	6.277	7.137	5.841	6.967	7.191	6.564	7.619	6.828	5.167	8.595	9.652
X 12k	6.354	5.717	6.958	7.411	7.415	7.771	8.997	7.754	7.457	5.248	5.724	6.717
X 13k	5.829	5.645	8.390	7.094	6.905	5.217	6.164	6.102	4.425	3.887	4.255	5.385
X 21k	6.137	6.110	8.671	6.644	7.453	7.676	8.398	7.069	7.079	5.064	6.237	8.754
X 22k	6.067	6.402	5.744	5.892	6.498	9.113	8.117	8.794	10.957	7.632	6.682	6.977
X 23k	6.365	6.464	7.172	5.739	8.482	6.288	6.159	5.423	5.963	4.467	5.606	5.889

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.827

X 1.. = 6.687 (-2.05) X 2.. = 6.967 (2.05)

X .1. = 7.240 (6.05) X .2. = 7.302 (6.95) X .3. = 5.939 (-13.00)

X ..1 = 6.956 (1.89) X ..2 = 6.698 (-1.89)

X 11. = 7.115 (4.22) X 12. = 7.197 (5.42) X 13. = 5.749 (-15.79)
X 21. = 7.364 (7.87) X 22. = 7.406 (8.49) X 23. = 6.130 (-10.21)

X 1.1 = 6.813 (-0.21) X 1.2 = 6.561 (-3.90) X 2.1 = 7.099 (3.99) X 2.2 = 6.834 (0.11)

X .11 = 7.357 (7.77) X .12 = 7.122 (4.32)
X .21 = 7.234 (5.96) X .22 = 7.369 (7.94)
X .31 = 6.277 (-8.05) X .32 = 5.602 (-17.95)

X 111 = 7.372 (7.98) X 121 = 7.124 (4.35) X 131 = 5.943 (-12.95)
X 112 = 6.858 (0.46) X 122 = 7.270 (6.49) X 132 = 5.555 (-18.63)
X 211 = 7.342 (7.55) X 221 = 7.734 (7.58) X 231 = 6.611 (-3.16)
X 212 = 7.386 (8.19) X 222 = 7.486 (9.40) X 232 = 5.648 (-17.28)

X L1 = 6.535 (-4.27) X L2 = 6.823 (-0.06) X L3 = 7.241 (6.07)
X L4 = 7.213 (5.66) X L5 = 6.431 (-5.80) X L6 = 6.715 (-1.60)

X M1 = 7.903 (15.77) X M2 = 6.676 (-2.19) X M3 = 6.491 (-4.91)
X M4 = 6.429 (-5.82) X M5 = 6.590 (-3.47) X M6 = 6.869 (0.62)

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (0.1%)	2.10228E+00 (21.2)	1.85274E+00 (18.8)	1.70227E+00 (15.2)
VR2 (0.1%)	2.10012E+00 (21.2)	7.11294E-01 (12.4)	
VR3 (0.1%)	9.31220E-01 (17.4)	1.13899E-00 (15.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.97245E-00	1.60449E+00	
PROBABILITE DU KI 2	0.00100	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.671 (0.426)	0.853 (0.367)	0.819 (0.380)
- DOSE	8.754 (0.995)	8.582 (0.998)	9.244 (0.998)
- AMENDEMENT*DOSE	0.023 (0.000)	0.029 (0.028)	0.028 (0.027)
- SUBSIDIAIRE	0.572 (0.489)	1.690 (0.750)	
- AMENDEMENT*SUBSIDIAIRE	0.001 (0.026)	0.301 (0.123)	
- DOSE*SUBSIDIAIRE	1.139 (0.673)	0.891 (0.426)	
- AMENDEM*DOSE*SUBSID	0.578 (0.427)	0.433 (0.342)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.962 (0.333)	1.096 (0.699)	
- DOSE	9.682 (1.000)	11.032 (1.000)	
- AMENDEMENT*DOSE	0.033 (0.032)	0.037 (0.036)	
- SUBSIDIAIRE	0.820 (0.373)	0.934 (0.340)	
- AMENDEMENT*SUBSIDIAIRE	0.001 (0.020)	0.001 (0.021)	
- DOSE*SUBSIDIAIRE	0.674 (0.481)	0.768 (0.473)	
- AMENDEM*DOSE*SUBSID	0.738 (0.273)	0.373 (0.304)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE IAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

Date : 21/01/85
Parametre: CPTF
Unite : g/kl
Annee:1984

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.179	0.706	1.031	0.649	1.138	0.744	0.713	0.790	0.939	0.620	1.229	1.195
X 12k	0.883	1.152	0.762	0.725	0.963	1.088	1.113	0.872	0.942	0.662	0.774	0.756
X 13k	0.695	0.482	0.735	1.013	0.674	0.626	0.580	0.610	0.369	0.359	0.347	0.574
X 21k	0.770	0.610	1.072	0.610	0.745	0.642	0.965	0.592	0.829	1.152	0.909	1.133
X 22k	0.690	0.711	0.718	0.934	0.794	1.135	0.854	1.213	1.694	1.049	0.668	0.906
X 23k	0.841	0.662	0.759	0.459	0.796	0.559	0.539	0.563	0.745	0.459	0.420	0.612

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.814

X 1.. = 0.800 (-1.73) X 2..= 0.828 (1.73)

X .1. = 0.893 (9.72) X .2. = 0.936 (14.98) X .3. = 0.613 (-24.70)

X ..1 = 0.837 (2.84) X ..2 = 0.791 (-2.84)

X 11. = 0.908 (11.52) X 12. = 0.903 (11.01) X 13. = 0.588 (-27.71)
X 21. = 0.878 (7.93) X 22. = 0.968 (18.96) X 23. = 0.637 (-21.70)

X 1.1 = 0.834 (2.53) X 1.2 = 0.765 (-5.99) X 2.1 = 0.840 (3.16) X 2.2 = 0.816 (0.30)

X .11 = 0.965 (18.56) X .12 = 0.821 (0.89)
X .21 = 0.921 (13.20) X .22 = 0.950 (16.76)
X .31 = 0.625 (-23.23) X .32 = 0.601 (-26.17)

X 111 = 1.031 (26.71) X 121 = 0.906 (11.34) X 131 = 0.566 (-30.46)
X 112 = 0.784 (-3.67) X 122 = 0.901 (10.67) X 132 = 0.611 (-24.95)
X 211 = 0.899 (10.42) X 221 = 0.937 (15.07) X 231 = 0.684 (-16.01)
X 212 = 0.858 (5.45) X 222 = 1.000 (22.84) X 232 = 0.591 (-27.39)

X L1 = 0.840 (3.21) X L2 = 0.807 (-0.90) X L3 = 0.846 (3.97)
X L4 = 0.793 (-3.80) X L5 = 0.822 (0.97) X L6 = 0.786 (-3.45)

X M1 = 0.969 (19.09) X M2 = 0.798 (-1.92) X M3 = 0.779 (-4.34)
X M4 = 0.756 (-7.17) X M5 = 0.741 (-8.92) X M6 = 0.840 (3.27)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (34%)	5.98985E-02 (30.1)	4.48094E-02 (26.0)	5.38604E-02 (28.5)
VR2 (24%)	4.40246E-02 (25.8)	1.77236E-02 (16.4)	
VR3 (42%)	4.95178E-02 (24.9)	4.61391E-02 (26.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.14677E-01	1.53672E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.239 (0.365)	0.319 (0.416)	0.264 (0.382)
- DOSE	12.331 (1.000)	16.484 (1.000)	13.714 (1.000)
- AMENDEMENT*DOSE	0.253 (0.219)	0.338 (0.279)	0.281 (0.239)
- SUBSIDIAIRE	0.975 (0.395)	2.175 (0.801)	
- AMENDEMENT*SUBSIDIAIRE	0.233 (0.362)	0.206 (0.342)	
- DOSE*SUBSIDIAIRE	1.149 (0.666)	1.018 (0.623)	
- AMENDEM*DOSE*SUBSID	1.099 (0.650)	0.974 (0.393)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.292 (0.402)	0.333 (0.427)	
- DOSE	15.128 (1.000)	17.262 (1.000)	
- AMENDEMENT*DOSE	0.310 (0.261)	0.354 (0.291)	
- SUBSIDIAIRE	0.789 (0.382)	0.901 (0.349)	
- AMENDEMENT*SUBSIDIAIRE	0.195 (0.335)	0.223 (0.356)	
- DOSE*SUBSIDIAIRE	0.963 (0.391)	1.099 (0.658)	
- AMENDEM*DOSE*SUBSID	0.922 (0.407)	1.052 (0.642)	

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ANAL SE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01.01.85
parametre: OKTF
file : file2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	14.121	16.242	12.211	10.547	11.213	10.745	11.416	12.547	9.901	7.648	9.495	10.479
X 12k	11.846	11.623	9.936	10.553	13.097	8.937	13.073	11.438	6.751	8.178	12.475	10.915
X 13k	11.292	10.603	14.498	13.635	9.348	8.208	10.878	9.152	9.279	8.013	8.784	8.887
X 21k	10.229	8.420	13.174	9.568	11.014	11.701	12.355	12.474	8.420	8.908	9.171	11.431
X 22k	11.730	10.937	10.985	8.622	9.964	9.113	12.218	12.130	10.505	10.781	12.409	12.957
X 23k	8.659	8.877	11.221	9.186	14.436	9.432	13.098	10.423	8.423	6.537	10.861	12.465

2 - MOYENNES ET ECARTS RELATIFS

X ... = 10.730

X 1.. = 10.770 (0.38) X 2..= 10.690 (-0.38)

X .1. = 11.060 (3.07) X .2. = 10.881 (1.41) X .3. = 10.249 (-4.48)

X ..1 = 11.123 (3.67) X ..2 = 10.336 (-3.67)

X 11. = 11.380 (6.06) X 12. = 10.733 (0.02) X 13. = 10.198 (-4.96)
X 21. = 10.739 (0.08) X 22. = 11.029 (2.79) X 23. = 10.301 (-4.00)

X 1.1 = 11.088 (3.34) X 1.2 = 10.453 (-2.58) X 2.1 = 11.159 (4.00) X 2.2 = 10.220 (-4.75)

X .11 = 11.227 (4.63) X .12 = 10.893 (1.52)
X .21 = 11.247 (4.81) X .22 = 10.515 (-2.00)
X .31 = 10.897 (1.56) X .32 = 9.602 (-10.52)

X 111 = 11.393 (6.18) X 121 = 11.191 (4.30) X 131 = 10.680 (-0.47)
X 112 = 11.368 (5.95) X 122 = 10.274 (-4.25) X 132 = 9.716 (-9.45)
X 211 = 11.060 (3.08) X 221 = 11.302 (5.33) X 231 = 11.115 (3.59)
X 212 = 10.417 (-2.91) X 222 = 10.757 (0.25) X 232 = 9.487 (-11.59)

X L1 = 11.382 (6.07) X L2 = 11.176 (4.15) X L3 = 10.601 (-1.21)
X L4 = 11.766 (9.66) X L5 = 8.612 (-19.74) X L6 = 10.844 (1.06)

X M1 = 12.397 (15.53) X M2 = 9.980 (-6.99) X M3 = 11.195 (4.33)
X M4 = 10.092 (-5.95) X M5 = 10.442 (-2.69) X M6 = 10.275 (-4.24)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c.1%)	4.56327E+00 (19.9)	5.53272E+00 (21.9)	3.151445E+00 (16.5)
VR2 (c.2%)	2.35927E+00 (14.3)	2.51391E+00 (14.3)	
VR3 (c.3%)	1.51138E+00 (11.5)	1.48045E+00 (11.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.51119E+00	8.11125E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.026 (0.132)	0.021 (0.120)	0.037 (0.157)
- DOSE	0.953 (0.401)	0.790 (0.469)	1.380 (0.730)
- AMENDEMENT*DOSE	0.323 (0.269)	0.268 (0.229)	0.467 (0.361)
- SUBSIDIAIRE	4.725 (0.919)	4.434 (0.912)	
- AMENDEMENT*SUBSIDIAIRE	0.274 (0.389)	0.280 (0.393)	
- DOSE*SUBSIDIAIRE	0.927 (0.411)	0.947 (0.404)	
- AMENDEM*DOSE*SUBSID	0.340 (0.281)	0.347 (0.286)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.042 (0.167)	0.037 (0.157)	
- DOSE	1.544 (0.778)	1.362 (0.735)	
- AMENDEMENT*DOSE	0.523 (0.398)	0.461 (0.361)	
- SUBSIDIAIRE	3.957 (0.951)	3.492 (0.936)	
- AMENDEMENT*SUBSIDIAIRE	0.147 (0.295)	0.130 (0.279)	
- DOSE*SUBSIDIAIRE	0.498 (0.383)	0.439 (0.347)	
- AMENDEM*DOSE*SUBSID	0.183 (0.165)	0.161 (0.148)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01-01-85
parametre: BCATF
unite : t/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.139	0.785	0.872	0.730	1.056	0.992	0.928	1.141	0.597	0.413	0.819	1.011
X 12k	0.809	1.111	1.067	1.047	1.252	0.777	1.020	1.357	1.256	0.477	0.516	0.385
X 13k	0.869	0.757	1.576	1.106	1.179	0.904	1.160	1.144	0.737	0.658	0.480	1.077
X 21k	0.684	0.745	1.090	0.975	0.994	1.030	1.255	1.081	1.043	0.461	0.820	1.442
X 22k	0.971	0.800	0.760	0.934	1.083	1.185	1.767	1.213	2.033	1.717	0.859	0.725
X 23k	1.093	1.120	1.519	0.995	1.792	1.258	1.078	1.056	0.820	0.817	0.981	1.071

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.004

X 1.. = 0.928 (-7.59) X 2..= 1.080 (7.59)

X .1. = 0.921 (-8.30) X .2. = 1.040 (3.54) X .3. = 1.052 (4.76)

X ..1 = 1.045 (4.02) X ..2 = 0.964 (-4.02)

X 11. = 0.874 (-13.01) X 12. = 0.940 (-6.42) X 13. = 0.971 (-3.35)
X 21. = 0.968 (-3.58) X 22. = 1.140 (13.50) X 23. = 1.133 (12.86)

X 1.1 = 0.963 (-4.11) X 1.2 = 0.893 (-11.07) X 2.1 = 1.126 (12.15) X 2.2 = 1.035 (3.04)

X .11 = 0.941 (-6.25) X .12 = 0.900 (-10.34)
X .21 = 1.085 (8.07) X .22 = 0.994 (-0.99)
X .31 = 1.107 (10.24) X .32 = 0.997 (-0.73)

X 111 = 0.902 (-10.20) X 121 = 0.987 (-1.75) X 131 = 1.000 (-0.39)
X 112 = 0.845 (-15.82) X 122 = 0.893 (-11.09) X 132 = 0.941 (-6.30)
X 211 = 0.981 (-2.31) X 221 = 1.184 (17.89) X 231 = 1.214 (20.86)
X 212 = 0.956 (-4.85) X 222 = 1.096 (9.11) X 232 = 1.053 (4.85)

X L1 = 0.907 (-9.69) X L2 = 1.058 (5.39) X L3 = 1.125 (12.04)
X L4 = 1.150 (14.51) X L5 = 0.919 (-8.46) X L6 = 0.866 (-13.79)

X M1 = 1.337 (33.14) X M2 = 0.976 (-2.83) X M3 = 0.929 (-7.50)
X M4 = 0.886 (-11.79) X M5 = 0.966 (-3.80) X M6 = 0.932 (-7.21)

C - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c/1%)	1.27472E-01 (35.6)	9.71014E-02 (31.0)	7.65905E-02 (27.6)
VR2 (c/2%)	1.21161E-01 (34.7)	4.45207E-03 (6.6)	
VR3 (c/3%)	4.02896E-02 (20.0)	6.36314E-02 (25.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	7.41274E+00	9.94809E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.283 (0.921)	4.309 (0.954)	5.464 (0.972)
- DOSE	0.987 (0.389)	1.296 (0.709)	1.643 (0.788)
- AMENDEMENT*DOSE	0.134 (0.125)	0.176 (0.160)	0.223 (0.196)
- SUBSIDIAIRE	0.967 (0.373)	26.321 (0.996)	
- AMENDEMENT*SUBSIDIAIRE	0.052 (0.184)	0.033 (0.149)	
- DOSE*SUBSIDIAIRE	0.189 (0.170)	0.120 (0.113)	
- AMENDEM*DOSE*SUBSID	0.184 (0.166)	0.117 (0.110)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	5.026 (0.972)	5.385 (0.982)	
- DOSE	1.511 (0.771)	1.769 (0.821)	
- AMENDEMENT*DOSE	0.205 (0.133)	0.240 (0.210)	
- SUBSIDIAIRE	1.408 (0.761)	1.648 (0.798)	
- AMENDEMENT*SUBSIDIAIRE	0.025 (0.131)	0.030 (0.142)	
- DOSE*SUBSIDIAIRE	0.092 (0.088)	0.107 (0.102)	
- AMENDEM*DOSE*SUBSID	0.089 (0.086)	0.104 (0.099)	

FRET
DPORT 01

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 3 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01 85
parametre: BMSTP
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	7.288	3.845	5.709	4.787	5.769	5.786	4.566	5.966	5.292	3.858	7.039	7.078
X 12k	5.371	7.435	5.563	6.767	6.741	5.751	5.934	8.239	7.221	4.021	4.474	4.450
X 13k	6.428	5.990	6.934	5.988	6.148	4.660	5.077	5.568	3.933	3.528	3.774	4.523
X 21k	4.618	5.216	6.087	6.910	5.217	6.178	5.288	6.919	5.365	4.147	5.145	8.633
X 22k	4.935	5.069	4.523	5.317	5.343	6.935	6.835	6.469	8.511	6.673	5.059	4.349
X 23k	5.717	5.860	6.750	5.359	6.969	5.520	4.542	4.648	4.771	4.140	4.485	4.665

2 - MOYENNES ET ECARTS RELATIFS

X ... = 5.622

X 1.. = 5.597 (-0.44) X 2..= 5.646 (0.44)

X .1. = 5.692 (1.25) X .2. = 5.925 (5.39) X .3. = 5.249 (-6.63)

X ..1 = 5.676 (0.96) X ..2 = 5.568 (-0.96)

X 11. = 5.582 (-0.71) X 12. = 5.997 (6.68) X 13. = 5.213 (-7.28)
X 21. = 5.802 (3.20) X 22. = 5.852 (4.09) X 23. = 5.285 (-5.98)

X 1.1 = 5.737 (2.04) X 1.2 = 5.458 (-2.92) X 2.1 = 5.614 (-0.13) X 2.2 = 5.678 (1.01)

X .11 = 5.665 (0.77) X .12 = 5.719 (1.72)
X .21 = 5.901 (4.96) X .22 = 5.948 (5.81)
X .31 = 5.460 (-2.87) X .32 = 5.037 (-10.39)

X 111 = 5.944 (5.73) X 121 = 5.884 (4.66) X 131 = 5.382 (-4.26)
X 112 = 5.220 (-7.15) X 122 = 6.110 (8.69) X 132 = 5.043 (-10.30)
X 211 = 5.387 (-4.18) X 221 = 5.918 (5.26) X 231 = 5.539 (-1.48)
X 212 = 6.217 (10.59) X 222 = 5.786 (2.92) X 232 = 5.032 (-10.49)

X L1 = 5.648 (0.46) X L2 = 5.891 (4.79) X L3 = 5.910 (5.12)
X L4 = 5.879 (4.58) X L5 = 5.147 (-8.44) X L6 = 5.256 (-6.51)

X M1 = 6.615 (17.67) X M2 = 5.526 (-1.70) X M3 = 5.285 (-5.99)
X M4 = 5.236 (-6.85) X M5 = 5.195 (-7.60) X M6 = 5.874 (4.48)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c.1%)	1.89943E-00 (24.5)	1.45661E+00 (21.5)	1.47191E+00 (21.6)
VR2 (c.2%)	1.92521E+00 (24.7)	2.66037E-01 (9.2)	
VR3 (c.3%)	7.85293E-01 (15.8)	1.11713E+00 (18.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.54909E+00	3.90997E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.323 (0.124)	0.030 (0.142)	0.030 (0.141)
- DOSE	1.458 (0.756)	1.941 (0.837)	1.921 (0.834)
- AMENDEMENT*DOSE	0.107 (0.101)	0.139 (0.129)	0.138 (0.125)
- SUBSIDIAIRE	0.108 (0.248)	0.781 (0.421)	
- AMENDEMENT*SUBSIDIAIRE	0.674 (0.424)	0.474 (0.496)	
- DOSE*SUBSIDIAIRE	0.571 (0.423)	0.401 (0.321)	
- AMENDEM*DOSE*SUBSID	2.120 (0.861)	1.491 (0.756)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.032 (0.148)	0.037 (0.158)	
- DOSE	2.102 (0.869)	2.421 (0.903)	
- AMENDEMENT*DOSE	0.151 (0.139)	0.174 (0.158)	
- SUBSIDIAIRE	0.154 (0.302)	0.178 (0.322)	
- AMENDEMENT*SUBSIDIAIRE	0.394 (0.460)	0.454 (0.489)	
- DOSE*SUBSIDIAIRE	0.333 (0.277)	0.394 (0.311)	
- AMENDEM*DOSE*SUBSID	1.238 (0.702)	1.426 (0.751)	

PRET
OPORT 01

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QTN
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	15.753	16.626	16.965	14.551	16.500	16.336	16.629	17.045	15.939	14.088	17.113	18.582
X 12k	16.737	19.624	17.559	17.892	18.879	22.280	20.072	17.667	16.713	14.349	16.396	17.740
X 13k	16.452	16.510	18.609	18.312	17.046	15.083	16.602	17.564	14.385	13.352	13.801	15.318
X 21k	15.940	15.183	17.946	16.116	17.460	17.436	16.546	16.787	15.289	15.901	15.403	18.439
X 22k	17.605	17.543	16.431	15.666	16.544	20.015	17.767	18.196	20.972	17.214	17.494	17.631
X 23k	17.877	18.385	18.366	15.762	18.517	15.674	17.562	16.714	17.971	14.884	16.247	16.208

2 - MOYENNES ET ECARTS RELATIFS

X ... = 16.955

X 1.. = 16.807 (-0.87) X 2..= 17.103 (0.87)

X .1. = 16.441 (-3.03) X .2. = 17.874 (5.42) X .3. = 16.550 (-2.39)

X ..1 = 17.058 (0.61) X ..2 = 16.852 (-0.61)

X 11. = 16.344 (-3.60) X 12. = 17.992 (6.12) X 13. = 16.086 (-5.12)
X 21. = 16.537 (-2.46) X 22. = 17.757 (4.73) X 23. = 17.014 (0.35)

X 1.1 = 16.786 (-1.00) X 1.2 = 16.829 (-0.74) X 2.1 = 17.330 (2.21) X 2.2 = 16.875 (-0.47)

X .11 = 16.457 (-2.94) X .12 = 16.424 (-3.13)
X .21 = 17.764 (4.77) X .22 = 17.985 (6.07)
X .31 = 16.953 (-0.01) X .32 = 16.147 (-4.76)

X 111 = 16.483 (-2.78) X 121 = 17.726 (4.55) X 131 = 16.149 (-4.75)
X 112 = 16.205 (-4.42) X 122 = 18.258 (7.69) X 132 = 16.023 (-5.50)
X 211 = 16.431 (-3.09) X 221 = 17.802 (5.00) X 231 = 17.757 (4.73)
X 212 = 16.644 (-1.84) X 222 = 17.711 (4.46) X 232 = 16.271 (-4.03)

X 11 = 17.020 (0.38) X 12 = 17.015 (0.35) X 13 = 17.648 (4.08)
X 14 = 17.429 (2.80) X 15 = 15.921 (-6.10) X 16 = 16.698 (-1.52)

X m1 = 17.772 (4.82) X m2 = 16.568 (-2.28) X m3 = 16.700 (-1.50)
X m4 = 16.678 (-1.63) X m5 = 16.671 (-1.68) X m6 = 17.342 (2.28)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.59996E+00 (9.5)	2.91593E+00 (10.1)	2.53673E+00 (9.4)
VR2 (cv2%)	4.21806E+00 (12.1)	4.78677E-01 (4.1)	
VR3 (cv3%)	1.23436E+00 (6.6)	1.98224E+00 (8.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.80672E+00	4.51553E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.603 (0.451)	0.538 (0.477)	0.618 (0.447)
- DOSE	5.880 (0.992)	5.243 (0.988)	6.026 (0.993)
- AMENDEMENT*DOSE	0.799 (0.465)	0.712 (0.496)	0.819 (0.459)
- SUBSIDIAIRE	0.181 (0.312)	1.595 (0.738)	
- AMENDEMENT*SUBSIDIAIRE	0.901 (0.354)	0.561 (0.467)	
- DOSE*SUBSIDIAIRE	1.390 (0.733)	0.865 (0.436)	
- AMENDEM*DOSE*SUBSID	1.055 (0.636)	0.657 (0.468)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.754 (0.394)	0.711 (0.408)	
- DOSE	7.353 (0.998)	6.932 (0.997)	
- AMENDEMENT*DOSE	0.999 (0.377)	0.942 (0.399)	
- SUBSIDIAIRE	0.367 (0.446)	0.346 (0.434)	
- AMENDEMENT*SUBSIDIAIRE	0.535 (0.475)	0.504 (0.488)	
- DOSE*SUBSIDIAIRE	0.825 (0.448)	0.778 (0.469)	
- AMENDEM*DOSE*SUBSID	0.626 (0.456)	0.590 (0.437)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QTP
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.605	2.715	2.935	2.337	2.887	2.392	2.601	2.591	2.595	2.272	2.809	2.856
X 12k	2.916	3.529	2.902	2.625	3.054	3.819	3.198	2.769	2.620	2.391	2.874	2.893
X 13k	2.888	2.725	2.980	3.185	2.676	2.599	2.533	2.800	2.162	2.062	2.102	2.283
X 21k	2.726	2.581	2.960	2.396	2.622	2.545	2.496	2.344	2.362	2.603	2.666	3.070
X 22k	3.272	2.870	2.717	2.952	2.741	3.271	2.575	2.979	3.697	2.966	2.765	2.884
X 23k	3.155	3.246	2.998	2.540	2.877	2.637	2.677	2.681	2.969	2.372	2.400	2.587

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.755

X 1.. = 2.727 (-1.02) X 2..= 2.783 (1.02)

X .1. = 2.624 (-4.78) X .2. = 2.970 (7.79) X .3. = 2.672 (-3.01)

X ..1 = 2.778 (0.83) X ..2 = 2.732 (-0.83)

X 11. = 2.633 (-4.44) X 12. = 2.966 (7.64) X 13. = 2.583 (-6.26)
X 21. = 2.614 (-5.12) X 22. = 2.974 (7.94) X 23. = 2.762 (0.23)

X 1.1 = 2.741 (-0.52) X 1.2 = 2.714 (-1.51) X 2.1 = 2.815 (2.18) X 2.2 = 2.751 (-0.14)

X .11 = 2.689 (-2.42) X .12 = 2.558 (-7.14)
X .21 = 2.944 (6.86) X .22 = 2.996 (8.73)
X .31 = 2.701 (-1.96) X .32 = 2.643 (-4.07)

X 111 = 2.739 (-0.60) X 121 = 2.927 (6.24) X 131 = 2.557 (-7.21)
X 112 = 2.527 (-8.28) X 122 = 3.004 (9.05) X 132 = 2.609 (-5.31)
X 211 = 2.639 (-4.23) X 221 = 2.961 (7.48) X 231 = 2.846 (3.29)
X 212 = 2.590 (-6.01) X 222 = 2.987 (8.41) X 232 = 2.677 (-2.84)

X 11 = 2.936 (6.55) X 12 = 2.794 (1.40) X 13 = 2.843 (3.19)
X 14 = 2.687 (-2.48) X 15 = 2.589 (-6.02) X 16 = 2.682 (-2.64)

X m1 = 2.947 (6.96) X m2 = 2.649 (-3.85) X m3 = 2.693 (-2.27)
X m4 = 2.735 (-0.72) X m5 = 2.674 (-2.95) X m6 = 2.833 (2.84)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.16925E-01 (12.4)	1.23736E-01 (12.8)	1.07100E-01 (11.9)
VR2 (cv2%)	9.66390E-02 (11.3)	6.46461E-03 (2.9)	
VR3 (cv3%)	6.35382E-02 (9.1)	8.15730E-02 (10.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.01476E+00	9.35010E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.484 (0.499)	0.458 (0.488)	0.529 (0.482)
- DOSE	7.221 (0.996)	6.823 (0.995)	7.883 (0.998)
- AMENDEMENT*DOSE	0.588 (0.432)	0.556 (0.414)	0.642 (0.459)
- SUBSIDIAIRE	0.389 (0.436)	5.811 (0.940)	
- AMENDEMENT*SUBSIDIAIRE	0.096 (0.243)	0.075 (0.217)	
- DOSE*SUBSIDIAIRE	0.790 (0.468)	0.616 (0.447)	
- AMENDEM*DOSE*SUBSID	0.874 (0.433)	0.681 (0.480)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.642 (0.432)	0.623 (0.440)	
- DOSE	9.572 (1.000)	9.285 (0.999)	
- AMENDEMENT*DOSE	0.780 (0.468)	0.756 (0.479)	
- SUBSIDIAIRE	0.426 (0.476)	0.413 (0.470)	
- AMENDEMENT*SUBSIDIAIRE	0.069 (0.210)	0.067 (0.207)	
- DOSE*SUBSIDIAIRE	0.569 (0.425)	0.552 (0.416)	
- AMENDEM*DOSE*SUBSID	0.629 (0.458)	0.611 (0.448)	

COMPARAISON DE MOYENNES PAR LE TEST
DE NEWMAN ET KEULS

date :01/01/85 parametre :QTP unite : g/m2

DONNEES :

DDL = 20 NI = 12 SE = 0.107

4 T = 2.624

8 T = 2.970

12 T = 2.672

RESULTATS :

		1 4 T	2 12 T	3 8 T
1	4 T			+
2	12 T			+
3	8 T			

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QTK
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	16.298	19.286	15.160	12.997	13.752	13.031	13.995	15.008	12.386	10.125	11.739	12.712
X 12k	14.705	14.664	12.737	13.370	16.064	12.692	15.940	14.191	9.122	10.550	15.297	13.587
X 13k	14.283	13.757	17.654	16.747	12.125	10.839	13.505	12.073	11.803	10.537	11.296	11.218
X 21k	14.956	10.982	15.852	12.232	13.578	14.028	14.380	14.904	10.709	11.085	11.776	14.034
X 22k	15.006	14.001	13.743	11.649	12.664	12.074	14.676	14.694	12.994	13.315	15.227	15.573
X 23k	11.885	12.128	14.230	12.169	17.556	12.382	15.939	13.458	11.685	9.494	13.583	15.013

2 - MOYENNES ET ECARTS RELATIFS

X ... = 13.457

X 1.. = 13.479 (0.16) X 2..= 13.435 (-0.16)

X .1. = 13.542 (0.63) X .2. = 13.689 (1.72) X .3. = 13.140 (-2.36)

X ..1 = 13.842 (2.86) X ..2 = 13.072 (-2.86)

X 11. = 13.874 (3.10) X 12. = 13.577 (0.89) X 13. = 12.986 (-3.50)
X 21. = 13.210 (-1.84) X 22. = 13.801 (2.56) X 23. = 13.294 (-1.21)

X 1.1 = 13.770 (2.33) X 1.2 = 13.188 (-2.00) X 2.1 = 13.913 (3.39) X 2.2 = 12.956 (-3.72)

X .11 = 13.715 (1.92) X .12 = 13.369 (-0.66)
X .21 = 14.015 (4.14) X .22 = 13.363 (-0.70)
X .31 = 13.795 (2.51) X .32 = 12.485 (-7.23)

X 111 = 13.888 (3.21) X 121 = 13.978 (3.87) X 131 = 13.444 (-0.09)
X 112 = 13.860 (2.99) X 122 = 13.176 (-2.09) X 132 = 12.528 (-6.90)
X 211 = 13.542 (0.63) X 221 = 14.052 (4.42) X 231 = 14.146 (5.12)
X 212 = 12.878 (-4.31) X 222 = 13.551 (0.70) X 232 = 12.441 (-7.55)

X 11 = 14.329 (6.48) X 12 = 14.045 (4.37) X 13 = 13.399 (-0.43)
X 14 = 14.397 (6.99) X 15 = 11.150 (-17.14) X 16 = 13.421 (-0.27)

X m1 = 15.181 (12.81) X m2 = 12.611 (-6.29) X m3 = 13.898 (3.28)
X m4 = 12.837 (-4.60) X m5 = 13.123 (-2.48) X m6 = 13.092 (-2.71)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.72852E+00 (16.2)	6.07389E+00 (18.3)	3.20362E+00 (13.3)
VR2 (cv2%)	2.27090E+00 (11.2)	2.14156E+00 (10.9)	
VR3 (cv3%)	1.57700E+00 (9.3)	1.60287E+00 (9.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.50217E+00	9.72799E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.007 (0.070)	0.006 (0.062)	0.011 (0.086)
- DOSE	0.410 (0.327)	0.319 (0.266)	0.605 (0.442)
- AMENDEMENT*DOSE	0.368 (0.300)	0.287 (0.243)	0.544 (0.406)
- SUBSIDIAIRE	4.693 (0.919)	4.976 (0.925)	
- AMENDEMENT*SUBSIDIAIRE	0.401 (0.461)	0.394 (0.457)	
- DOSE*SUBSIDIAIRE	0.924 (0.413)	0.909 (0.418)	
- AMENDEM*DOSE*SUBSID	0.332 (0.275)	0.326 (0.271)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.012 (0.091)	0.010 (0.083)	
- DOSE	0.667 (0.478)	0.563 (0.422)	
- AMENDEMENT*DOSE	0.599 (0.442)	0.506 (0.388)	
- SUBSIDIAIRE	3.666 (0.942)	3.093 (0.919)	
- AMENDEMENT*SUBSIDIAIRE	0.217 (0.352)	0.183 (0.326)	
- DOSE*SUBSIDIAIRE	0.501 (0.386)	0.423 (0.337)	
- AMENDEM*DOSE*SUBSID	0.180 (0.163)	0.152 (0.140)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/01/85
parametre: QTMG
unite : g/m2

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	7.910	4.636	6.508	5.549	6.615	6.637	5.447	6.867	6.065	4.629	7.804	7.857
X 12k	6.197	8.361	6.391	7.618	7.685	7.031	6.911	9.157	8.031	4.793	5.458	5.452
X 13k	7.292	6.901	7.916	6.929	7.116	5.557	6.019	6.590	4.796	4.411	4.653	5.409
X 21k	5.448	6.017	6.844	7.680	6.093	6.973	6.579	7.670	6.062	4.824	6.013	8.880
X 22k	5.903	5.974	5.419	6.137	6.285	7.844	7.634	7.324	9.721	7.544	6.042	5.242
X 23k	6.629	6.872	7.659	6.191	7.870	6.324	5.540	5.636	5.808	5.081	5.413	5.557

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.499

X 1.. = 6.478 (-0.33) X 2..= 6.520 (0.33)

X .1. = 6.484 (-0.24) X .2. = 6.840 (5.24) X .3. = 6.174 (-5.01)

X ..1 = 6.549 (0.77) X ..2 = 6.449 (-0.77)

X 11. = 6.377 (-1.88) X 12. = 6.924 (6.54) X 13. = 6.133 (-5.64)
X 21. = 6.590 (1.40) X 22. = 6.756 (3.95) X 23. = 6.215 (-4.37)

X 1.1 = 6.601 (1.57) X 1.2 = 6.355 (-2.22) X 2.1 = 6.498 (-0.02) X 2.2 = 6.543 (0.67)

X .11 = 6.449 (-0.77) X .12 = 6.518 (0.29)
X .21 = 6.807 (4.73) X .22 = 6.873 (5.76)
X .31 = 6.393 (-1.64) X .32 = 5.955 (-8.37)

X 111 = 6.725 (3.48) X 121 = 6.779 (4.31) X 131 = 6.299 (-3.08)
X 112 = 6.029 (-7.23) X 122 = 7.069 (8.76) X 132 = 5.966 (-8.20)
X 211 = 6.173 (-5.02) X 221 = 6.834 (5.15) X 231 = 6.487 (-0.19)
X 212 = 7.007 (7.82) X 222 = 6.677 (2.75) X 232 = 5.944 (-8.55)

X 11 = 6.512 (0.19) X 12 = 6.737 (3.66) X 13 = 6.836 (5.18)
X 14 = 6.781 (4.34) X 15 = 5.981 (-7.98) X 16 = 6.148 (-5.40)

X m1 = 7.484 (15.16) X m2 = 6.372 (-1.95) X m3 = 6.167 (-5.11)
X m4 = 6.138 (-5.55) X m5 = 6.061 (-6.75) X m6 = 6.772 (4.20)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.87003E+00 (21.0)	1.46073E+00 (18.6)	1.44099E+00 (18.5)
VR2 (cv2%)	2.00246E+00 (21.8)	2.79266E-01 (8.1)	
VR3 (cv3%)	7.72134E-01 (13.5)	1.11677E+00 (16.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.68443E+00	3.74562E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.017 (0.109)	0.022 (0.123)	0.023 (0.123)
- DOSE	1.426 (0.742)	1.825 (0.819)	1.850 (0.823)
- AMENDEMENT*DOSE	0.120 (0.113)	0.154 (0.142)	0.156 (0.143)
- SUBSIDIAIRE	0.091 (0.230)	0.654 (0.460)	
- AMENDEMENT*SUBSIDIAIRE	0.494 (0.495)	0.342 (0.429)	
- DOSE*SUBSIDIAIRE	0.662 (0.471)	0.458 (0.357)	
- AMENDEM*DOSE*SUBSID	2.263 (0.877)	1.565 (0.772)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.024 (0.129)	0.028 (0.137)	
- DOSE	1.998 (0.856)	2.277 (0.889)	
- AMENDEMENT*DOSE	0.169 (0.154)	0.192 (0.173)	
- SUBSIDIAIRE	0.137 (0.286)	0.156 (0.303)	
- AMENDEMENT*SUBSIDIAIRE	0.286 (0.398)	0.326 (0.423)	
- DOSE*SUBSIDIAIRE	0.383 (0.311)	0.437 (0.346)	
- AMENDEM*DOSE*SUBSID	1.310 (0.722)	1.493 (0.767)	

3.2. Analyses de variance des paramètres "sol" observés en début de cycle (84 A)
(pour les sigles cf l'annexe 1.2.)

3.2.1. Analyse de variance des paramètres "sol" observés dans l'horizon (0-20)cm.

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: A0-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	50.600	53.100	52.300	49.900	45.500	49.100	37.900	44.300	44.300	44.700	48.200	48.200
X 12k	50.900	53.400	51.300	50.400	47.500	47.200	47.800	45.900	39.900	40.800	47.000	48.200
X 13k	49.600	49.900	52.500	52.100	47.300	45.500	46.300	45.300	41.700	39.400	43.500	37.200
X 21k	50.700	50.800	48.500	51.000	50.500	51.400	38.300	40.100	47.200	47.400	37.600	39.700
X 22k	49.000	49.900	49.600	49.200	49.800	47.500	45.300	45.400	40.100	41.200	46.700	49.300
X 23k	51.600	52.900	51.000	50.900	50.200	51.200	49.200	42.200	48.200	50.500	48.100	46.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 47.182

X 1.. = 46.900 (-0.60) X 2.. = 47.464 (0.60)

X .1. = 46.721 (-0.98) X .2. = 47.208 (0.06) X .3. = 47.617 (0.92)

X ..1 = 47.094 (-0.19) X ..2 = 47.269 (0.19)

X 11. = 47.342 (0.34) X 12. = 47.500 (0.67) X 13. = 45.858 (-2.81)
X 21. = 46.100 (-2.29) X 22. = 46.917 (-0.56) X 23. = 49.375 (4.65)

X 1.1 = 46.378 (-0.64) X 1.2 = 46.922 (-0.55) X 2.1 = 47.311 (0.27) X 2.2 = 47.617 (0.92)

X .11 = 45.967 (-2.58) X .12 = 47.475 (0.62)
X .21 = 47.050 (-0.28) X .22 = 47.367 (0.39)
X .31 = 48.267 (2.30) X .32 = 46.967 (-0.46)

X 111 = 46.467 (-1.52) X 121 = 47.350 (0.36) X 131 = 46.917 (-0.77)
X 112 = 48.217 (2.19) X 122 = 47.650 (0.99) X 132 = 44.900 (-4.84)
X 211 = 45.467 (-3.64) X 221 = 46.750 (-0.92) X 231 = 49.717 (5.37)
X 212 = 46.733 (-0.95) X 222 = 47.083 (-0.21) X 232 = 49.033 (3.92)

X 11 = 51.033 (8.16) X 12 = 50.700 (7.46) X 13 = 48.558 (2.92)
X 14 = 44.000 (-6.74) X 15 = 43.783 (-7.20) X 16 = 45.017 (-4.59)

X m1 = 46.833 (-0.74) X m2 = 46.725 (-0.97) X m3 = 47.242 (0.13)
X m4 = 48.042 (1.82) X m5 = 47.042 (-0.30) X m6 = 47.208 (0.06)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c/1%)	1.60106E+01 (8.5)	4.21105E+01 (13.8)	1.97572E+01 (9.3)
VR2 (c/2%)	1.12725E+00 (2.3)	1.25725E+00 (2.4)	
VR3 (c/3%)	3.02692E+00 (3.7)	3.00092E+00 (3.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.95305E+01	4.05597E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.357 (0.438)	0.136 (0.284)	0.296 (0.401)
- DOSE	0.302 (0.254)	0.115 (0.108)	0.249 (0.216)
- AMENDEMENT*DOSE	2.491 (0.899)	0.947 (0.404)	2.060 (0.848)
- SUBSIDIAIRE	0.489 (0.480)	0.438 (0.459)	
- AMENDEMENT*SUBSIDIAIRE	0.101 (0.249)	0.102 (0.250)	
- DOSE*SUBSIDIAIRE	3.938 (0.968)	3.972 (0.969)	
- AMENDEM*DOSE*SUBSID	0.384 (0.310)	0.388 (0.312)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.713 (0.407)	0.310 (0.413)	
- DOSE	0.601 (0.443)	0.261 (0.226)	
- AMENDEMENT*DOSE	4.967 (0.989)	2.159 (0.876)	
- SUBSIDIAIRE	0.069 (0.210)	0.030 (0.142)	
- AMENDEMENT*SUBSIDIAIRE	0.038 (0.160)	0.017 (0.107)	
- DOSE*SUBSIDIAIRE	1.484 (0.765)	0.645 (0.467)	
- AMENDEM*DOSE*SUBSID	0.145 (0.134)	0.063 (0.061)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	17.100	15.900	16.900	18.100	20.900	17.100	16.100	13.700	16.500	14.800	16.300	17.500
X 12k	15.600	15.700	15.900	16.500	15.700	14.900	16.400	14.300	13.600	14.800	16.400	17.300
X 13k	16.200	16.100	17.800	17.200	15.100	15.800	16.400	16.200	16.400	15.000	14.900	16.900
X 21k	17.100	17.300	18.400	17.500	17.100	18.300	14.800	16.300	15.100	14.900	14.200	14.000
X 22k	17.400	17.400	16.700	18.900	16.500	15.500	15.300	16.200	13.100	13.800	16.700	15.200
X 23k	16.900	15.800	16.500	16.900	19.100	18.400	16.400	18.100	16.400	16.400	14.100	18.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 16.294

X 1.. = 16.167 (-0.78) X 2..= 16.422 (0.78)

X .1. = 16.517 (1.36) X .2. = 15.925 (-2.88) X .3. = 16.542 (1.52)

X ..1 = 16.278 (-0.10) X ..2 = 16.311 (0.10)

X 11. = 16.742 (2.74) X 12. = 15.592 (-4.31) X 13. = 16.167 (-0.78)
X 21. = 16.292 (-0.02) X 22. = 16.058 (-1.45) X 23. = 16.917 (3.82)

X 1.1 = 16.344 (0.31) X 1.2 = 15.989 (-1.88) X 2.1 = 16.211 (-0.51) X 2.2 = 16.633 (2.08)

X .11 = 16.708 (2.54) X .12 = 16.325 (0.19)
X .21 = 15.775 (-3.19) X .22 = 15.875 (-2.57)
X .31 = 16.350 (0.34) X .32 = 16.733 (2.69)

X 111 = 17.300 (6.17) X 121 = 15.600 (-4.26) X 131 = 16.133 (-0.99)
X 112 = 16.183 (-0.68) X 122 = 15.583 (-4.36) X 132 = 16.200 (-0.58)
X 211 = 16.117 (-1.09) X 221 = 15.950 (-2.11) X 231 = 16.567 (1.67)
X 212 = 16.467 (1.06) X 222 = 16.167 (-0.78) X 232 = 17.267 (5.97)

X 11 = 16.542 (1.52) X 12 = 17.275 (6.02) X 13 = 17.075 (4.79)
X 14 = 15.850 (-2.73) X 15 = 15.067 (-7.53) X 16 = 15.958 (-2.06)

X m1 = 15.942 (-2.17) X m2 = 16.275 (-0.12) X m3 = 16.917 (3.82)
X m4 = 16.450 (0.95) X m5 = 15.833 (-2.83) X m6 = 16.350 (0.34)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c=1%)	2.09849E+00 (8.9)	3.39349E+00 (11.3)	2.17197E+00 (9.0)
VR2 (c=2%)	1.16333E+00 (6.6)	1.82900E+00 (8.3)	
VR3 (c=3%)	1.08520E+00 (6.4)	9.52067E-01 (6.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.48097E+00	8.45542E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.560 (0.467)	0.346 (0.432)	0.541 (0.477)
- DOSE	1.892 (0.830)	1.170 (0.673)	1.828 (0.820)
- AMENDEMENT*DOSE	1.125 (0.659)	0.696 (0.488)	1.087 (0.643)
- SUBSIDIAIRE	0.017 (0.104)	0.011 (0.082)	
- AMENDEMENT*SUBSIDIAIRE	2.508 (0.878)	2.859 (0.900)	
- DOSE*SUBSIDIAIRE	0.831 (0.451)	0.947 (0.404)	
- AMENDEM*DOSE*SUBSID	0.547 (0.410)	0.624 (0.451)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.785 (0.384)	0.583 (0.455)	
- DOSE	2.650 (0.921)	1.969 (0.852)	
- AMENDEMENT*DOSE	1.575 (0.785)	1.171 (0.681)	
- SUBSIDIAIRE	0.013 (0.096)	0.010 (0.082)	
- AMENDEMENT*SUBSIDIAIRE	1.817 (0.819)	1.350 (0.751)	
- DOSE*SUBSIDIAIRE	0.602 (0.443)	0.447 (0.352)	
- AMENDEM*DOSE*SUBSID	0.396 (0.320)	0.295 (0.250)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: LBO-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	9.400	9.900	10.200	8.700	8.500	7.600	8.100	9.000	7.900	8.700	9.500	9.200
X 12k	9.400	8.500	10.300	10.400	9.100	8.700	7.700	8.300	7.700	8.700	10.300	10.100
X 13k	10.400	7.900	9.700	9.500	10.700	8.700	14.000	11.400	7.300	6.800	7.100	8.500
X 21k	8.400	9.500	10.000	9.800	7.300	9.800	7.300	7.800	8.100	8.300	7.000	7.500
X 22k	10.600	9.800	7.700	9.200	9.900	9.600	7.000	7.300	7.700	6.700	7.000	7.900
X 23k	9.200	9.600	8.900	12.000	9.700	9.300	9.300	9.000	9.300	10.000	10.300	10.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 8.999

X 1.. = 9.122 (1.37) X 2..= 8.875 (-1.37)

X .1. = 8.646 (-3.92) X .2. = 8.775 (-2.48) X .3. = 9.575 (6.41)

X ..1 = 8.978 (-0.23) X ..2 = 9.019 (0.23)

X 11. = 8.892 (-1.19) X 12. = 9.142 (1.59) X 13. = 9.333 (3.72)
X 21. = 8.400 (-6.65) X 22. = 8.408 (-6.56) X 23. = 9.817 (9.09)

X 1.1 = 9.294 (3.29) X 1.2 = 8.950 (-0.54) X 2.1 = 8.661 (-3.75) X 2.2 = 9.089 (1.00)

X .11 = 8.475 (-5.82) X .12 = 8.817 (-2.02)
X .21 = 8.700 (-3.32) X .22 = 8.850 (-1.65)
X .31 = 9.758 (8.44) X .32 = 9.392 (4.37)

X 111 = 8.933 (-0.73) X 121 = 9.083 (0.94) X 131 = 9.867 (9.65)
X 112 = 8.850 (-1.65) X 122 = 9.200 (2.24) X 132 = 8.800 (-2.21)
X 211 = 8.017 (-10.91) X 221 = 8.317 (-7.58) X 231 = 9.650 (7.24)
X 212 = 8.783 (-2.39) X 222 = 8.500 (-5.54) X 232 = 9.983 (10.94)

X 11 = 9.383 (4.28) X 12 = 9.700 (7.79) X 13 = 9.092 (1.03)
X 14 = 8.975 (-0.26) X 15 = 8.142 (-9.52) X 16 = 8.700 (-3.32)

X m1 = 8.592 (-4.52) X m2 = 8.467 (-5.91) X m3 = 8.467 (-5.91)
X m4 = 10.058 (11.78) X m5 = 9.525 (5.85) X m6 = 8.883 (-1.23)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.47294E+00 (17.5)	2.15027E+00 (16.3)	1.80422E+00 (14.9)
VR2 (cv2%)	3.28250E-01 (6.4)	5.80917E-01 (8.5)	
VR3 (cv3%)	7.41650E-01 (9.6)	6.91117E-01 (9.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.10052E+01	7.98521E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.445 (0.483)	0.512 (0.488)	0.610 (0.450)
- DOSE	2.459 (0.896)	2.828 (0.923)	3.370 (0.951)
- AMENDEMENT*DOSE	1.007 (0.619)	1.158 (0.669)	1.380 (0.726)
- SUBSIDIAIRE	0.095 (0.235)	0.054 (0.181)	
- AMENDEMENT*SUBSIDIAIRE	3.618 (0.934)	3.883 (0.943)	
- DOSE*SUBSIDIAIRE	1.086 (0.646)	1.165 (0.671)	
- AMENDEM*DOSE*SUBSID	0.908 (0.419)	0.974 (0.393)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.790 (0.382)	0.871 (0.358)	
- DOSE	4.365 (0.983)	4.811 (0.988)	
- AMENDEMENT*DOSE	1.787 (0.824)	1.970 (0.852)	
- SUBSIDIAIRE	0.022 (0.124)	0.025 (0.130)	
- AMENDEMENT*SUBSIDIAIRE	1.927 (0.832)	2.123 (0.852)	
- DOSE*SUBSIDIAIRE	0.578 (0.430)	0.637 (0.462)	
- AMENDEM*DOSE*SUBSID	0.484 (0.375)	0.533 (0.404)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: SF0-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	11.000	11.000	10.900	11.700	14.300	14.500	15.400	15.000	16.900	18.300	16.500	16.100
X 12k	11.700	11.400	12.700	12.700	14.700	15.300	16.000	15.700	16.800	16.300	17.000	16.700
X 13k	11.700	14.000	11.400	11.800	14.600	16.300	10.200	12.200	16.800	15.600	14.600	14.500
X 21k	13.000	11.700	12.300	12.000	14.400	11.700	16.800	16.900	17.600	17.900	18.300	17.800
X 22k	11.600	11.400	14.900	12.200	13.100	14.800	18.300	17.800	17.300	17.400	15.300	16.500
X 23k	10.500	11.000	13.900	10.500	11.200	11.100	15.200	17.700	15.000	14.400	16.300	15.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 14.383

X 1.. = 14.231 (-1.06) X 2..= 14.536 (1.06)

X .1. = 14.667 (1.97) X .2. = 14.900 (3.59) X .3. = 13.583 (-5.56)

X ..1 = 14.394 (0.08) X ..2 = 14.372 (-0.08)

X 11. = 14.300 (-0.58) X 12. = 14.750 (2.55) X 13. = 13.642 (-5.16)
X 21. = 15.033 (4.52) X 22. = 15.050 (4.63) X 23. = 13.525 (-5.97)

X 1.1 = 14.067 (-2.20) X 1.2 = 14.394 (0.08) X 2.1 = 14.722 (2.36) X 2.2 = 14.350 (-0.23)

X .11 = 14.783 (2.78) X .12 = 14.550 (1.16)
X .21 = 14.950 (3.94) X .22 = 14.850 (3.24)
X .31 = 13.450 (-6.49) X .32 = 13.717 (-4.63)

X 111 = 14.167 (-1.51) X 121 = 14.817 (3.01) X 131 = 13.217 (-8.11)
X 112 = 14.433 (0.35) X 122 = 14.683 (2.09) X 132 = 14.067 (-2.20)
X 211 = 15.400 (7.07) X 221 = 15.083 (4.87) X 231 = 13.683 (-4.87)
X 212 = 14.667 (1.97) X 222 = 15.017 (4.40) X 232 = 13.367 (-7.07)

X 11 = 11.667 (-18.89) X 12 = 12.250 (-14.83) X 13 = 13.833 (-3.82)
X 14 = 15.600 (8.46) X 15 = 16.692 (16.05) X 16 = 16.258 (13.04)

X m1 = 14.167 (-1.51) X m2 = 14.042 (-2.38) X m3 = 14.442 (0.41)
X m4 = 14.025 (-2.49) X m5 = 14.750 (2.55) X m6 = 14.875 (3.42)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.67920E+00 (13.3)	1.41847E+01 (26.2)	4.19600E+00 (14.2)
VR2 (cv2%)	7.08556E-01 (5.9)	1.92889E-01 (3.1)	
VR3 (cv3%)	8.44622E-01 (6.4)	9.47756E-01 (6.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.30728E+01	4.54425E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.457 (0.488)	0.118 (0.267)	0.401 (0.459)
- DOSE	3.220 (0.944)	0.835 (0.449)	2.823 (0.923)
- AMENDEMENT*DOSE	0.295 (0.249)	0.076 (0.074)	0.258 (0.222)
- SUBSIDIAIRE	0.013 (0.089)	0.046 (0.168)	
- AMENDEMENT*SUBSIDIAIRE	2.611 (0.885)	2.327 (0.864)	
- DOSE*SUBSIDIAIRE	0.476 (0.368)	0.424 (0.336)	
- AMENDEM*DOSE*SUBSID	0.795 (0.466)	0.709 (0.494)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.855 (0.362)	0.273 (0.390)	
- DOSE	6.029 (0.995)	1.921 (0.845)	
- AMENDEMENT*DOSE	0.552 (0.415)	0.176 (0.160)	
- SUBSIDIAIRE	0.005 (0.055)	0.001 (0.031)	
- AMENDEMENT*SUBSIDIAIRE	1.122 (0.705)	0.358 (0.441)	
- DOSE*SUBSIDIAIRE	0.205 (0.183)	0.065 (0.063)	
- AMENDEM*DOSE*SUBSID	0.342 (0.283)	0.109 (0.103)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: SGO-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.000	4.500	5.200	7.000	6.500	5.800	16.500	11.800	10.100	7.400	4.400	5.100
X 12k	7.000	5.600	5.600	5.500	7.800	8.600	6.600	8.800	16.700	15.900	6.600	4.400
X 13k	7.900	6.300	4.600	4.300	6.800	8.300	7.200	8.800	12.300	18.500	14.300	18.400
X 21k	5.300	4.600	5.800	5.900	4.900	4.900	18.400	14.400	6.900	5.800	17.800	14.600
X 22k	6.700	5.600	5.400	5.600	5.800	7.500	8.500	7.500	16.400	15.900	8.300	5.400
X 23k	5.700	5.700	6.200	5.700	5.400	4.200	5.900	7.200	5.800	5.000	6.200	6.400

2 - MOYENNES ET ECARTS RELATIFS

X ... = 8.103

X 1.. = 8.503 (4.94) X 2..= 7.703 (-4.94)

X .1. = 8.275 (2.13) X .2. = 8.237 (1.66) X .3. = 7.796 (-3.79)

X ..1 = 8.236 (1.65) X ..2 = 7.969 (-1.65)

X 11. = 7.442 (-8.16) X 12. = 8.258 (1.92) X 13. = 9.808 (21.05)
X 21. = 9.108 (12.41) X 22. = 8.217 (1.41) X 23. = 5.783 (-28.63)

X 1.1 = 8.394 (3.60) X 1.2 = 8.611 (6.27) X 2.1 = 8.078 (-0.31) X 2.2 = 7.328 (-9.56)

X .11 = 8.900 (9.84) X .12 = 7.650 (-5.59)
X .21 = 8.450 (4.29) X .22 = 8.025 (-0.96)
X .31 = 7.358 (-9.19) X .32 = 8.233 (1.61)

X 111 = 7.950 (-1.89) X 121 = 8.383 (3.46) X 131 = 8.850 (9.22)
X 112 = 6.933 (-14.43) X 122 = 8.133 (0.38) X 132 = 10.767 (32.88)
X 211 = 9.850 (21.56) X 221 = 8.517 (5.11) X 231 = 5.867 (-27.60)
X 212 = 8.367 (3.26) X 222 = 7.917 (-2.30) X 232 = 5.700 (-29.65)

X 11 = 5.825 (-28.11) X 12 = 5.567 (-31.30) X 13 = 6.375 (-21.32)
X 14 = 10.133 (25.06) X 15 = 11.392 (40.59) X 16 = 9.325 (15.08)

X m1 = 9.008 (11.18) X m2 = 9.558 (17.96) X m3 = 7.850 (-3.12)
X m4 = 6.633 (-18.14) X m5 = 7.675 (-5.28) X m6 = 7.892 (-2.61)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.54660E+01 (62.3)	3.77779E+01 (75.9)	2.85989E+01 (66.0)
VR2 (cv2%)	8.45333E-01 (11.3)	1.30800E+00 (14.1)	
VR3 (cv3%)	2.05400E+00 (17.7)	1.96147E+00 (17.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.76359E+01	4.64127E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.452 (0.486)	0.305 (0.408)	0.403 (0.461)
- DOSE	0.067 (0.065)	0.045 (0.044)	0.060 (0.058)
- AMENDEMENT*DOSE	2.010 (0.847)	1.355 (0.724)	1.790 (0.809)
- SUBSIDIAIRE	1.514 (0.727)	0.979 (0.370)	
- AMENDEMENT*SUBSIDIAIRE	2.047 (0.838)	2.144 (0.848)	
- DOSE*SUBSIDIAIRE	3.353 (0.950)	3.511 (0.956)	
- AMENDEM*DOSE*SUBSID	0.685 (0.483)	0.718 (0.498)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.020 (0.681)	0.710 (0.408)	
- DOSE	0.151 (0.139)	0.105 (0.100)	
- AMENDEMENT*DOSE	4.530 (0.985)	3.155 (0.950)	
- SUBSIDIAIRE	0.113 (0.263)	0.079 (0.223)	
- AMENDEMENT*SUBSIDIAIRE	0.372 (0.449)	0.259 (0.381)	
- DOSE*SUBSIDIAIRE	0.610 (0.448)	0.424 (0.338)	
- AMENDEM*DOSE*SUBSID	0.125 (0.117)	0.087 (0.083)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: HCCO-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	48.500	54.300	48.300	48.100	45.400	45.600	36.200	39.600	40.900	41.400	45.900	45.300
X 12k	48.800	49.200	46.800	47.400	45.400	43.400	44.100	42.000	36.900	38.800	44.300	45.700
X 13k	47.400	48.800	50.500	51.400	41.600	41.800	44.700	41.900	39.900	37.000	38.700	36.600
X 21k	51.900	49.700	49.300	49.000	47.800	47.100	35.200	37.300	44.300	43.300	36.900	36.700
X 22k	48.900	49.800	46.300	45.900	46.200	43.100	41.700	42.400	37.300	38.400	43.900	47.500
X 23k	48.300	50.000	49.700	47.200	47.800	48.000	48.400	41.900	44.900	44.100	44.400	44.700

2 - MOYENNES ET ECARTS RELATIFS

X ... = 44.610

X 1.. = 44.239 (-0.83) X 2..= 44.981 (0.83)

X .1. = 44.500 (-0.25) X .2. = 44.342 (-0.60) X .3. = 44.987 (0.85)

X ..1 = 44.653 (0.10) X ..2 = 44.567 (-0.10)

X 11. = 44.958 (0.78) X 12. = 44.400 (-0.47) X 13. = 43.358 (-2.81)
X 21. = 44.042 (-1.27) X 22. = 44.283 (-0.73) X 23. = 46.617 (4.50)

X 1.1 = 44.128 (-1.08) X 1.2 = 44.350 (-0.58) X 2.1 = 45.178 (1.27) X 2.2 = 44.783 (0.39)

X .11 = 44.217 (-0.88) X .12 = 44.783 (0.39)
X .21 = 44.217 (-0.88) X .22 = 44.467 (-0.32)
X .31 = 45.525 (2.05) X .32 = 44.450 (-0.36)

X 111 = 44.200 (-0.92) X 121 = 44.383 (-0.51) X 131 = 43.800 (-1.82)
X 112 = 45.717 (2.48) X 122 = 44.417 (-0.43) X 132 = 42.917 (-3.80)
X 211 = 44.233 (-0.84) X 221 = 44.050 (-1.25) X 231 = 47.250 (5.92)
X 212 = 43.850 (-1.70) X 222 = 44.517 (-0.21) X 232 = 45.983 (3.08)

X 11 = 49.633 (11.26) X 12 = 48.325 (8.33) X 13 = 45.267 (1.47)
X 14 = 41.283 (-7.46) X 15 = 40.600 (-8.99) X 16 = 42.550 (-4.62)

X ■1 = 44.658 (0.11) X ■2 = 43.725 (-1.98) X ■3 = 45.492 (1.98)
X ■4 = 45.558 (2.13) X ■5 = 44.067 (-1.22) X ■6 = 44.158 (-1.01)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.61110E+01 (9.0)	4.87007E+01 (15.6)	1.83619E+01 (9.6)
VR2 (cv2%)	2.12147E+00 (3.3)	2.63281E+00 (3.6)	
VR3 (cv3%)	2.41221E+00 (3.5)	2.30994E+00 (3.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.08058E+01	4.64108E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.615 (0.446)	0.203 (0.340)	0.539 (0.478)
- DOSE	0.169 (0.154)	0.056 (0.054)	0.148 (0.137)
- AMENDEMENT*DOSE	1.829 (0.820)	0.605 (0.441)	1.604 (0.775)
- SUBSIDIAIRE	0.063 (0.194)	0.051 (0.176)	
- AMENDEMENT*SUBSIDIAIRE	0.709 (0.412)	0.741 (0.402)	
- DOSE*SUBSIDIAIRE	1.887 (0.829)	1.970 (0.841)	
- AMENDEM*DOSE*SUBSID	0.872 (0.434)	0.910 (0.418)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.259 (0.734)	0.474 (0.499)	
- DOSE	0.346 (0.286)	0.130 (0.122)	
- AMENDEMENT*DOSE	3.747 (0.970)	1.410 (0.747)	
- SUBSIDIAIRE	0.017 (0.108)	0.006 (0.066)	
- AMENDEMENT*SUBSIDIAIRE	0.218 (0.352)	0.082 (0.227)	
- DOSE*SUBSIDIAIRE	0.579 (0.431)	0.218 (0.193)	
- AMENDEM*DOSE*SUBSID	0.267 (0.230)	0.101 (0.096)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: HPFP0-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	33.600	36.500	32.600	31.100	27.600	27.400	24.400	26.100	26.400	27.700	27.500	27.200
X 12k	32.700	33.600	30.300	30.000	30.300	28.100	27.700	27.600	23.700	25.100	25.200	27.400
X 13k	31.400	31.900	33.300	32.000	27.600	28.400	29.200	27.700	25.700	23.600	24.200	21.900
X 21k	32.000	30.900	32.900	31.600	28.400	27.900	23.100	24.400	28.400	27.400	23.500	22.400
X 22k	30.100	32.800	28.000	27.900	27.600	28.500	27.300	28.000	23.800	25.100	27.500	27.500
X 23k	32.500	35.400	31.200	30.100	28.200	29.300	31.900	27.400	28.200	28.200	26.300	26.200

2 - MOYENNES ET ECARTS RELATIFS

X ... = 28.453

X 1.. = 28.519 (0.23) X 2..= 28.386 (-0.23)

X .1. = 28.375 (-0.27) X .2. = 28.158 (-1.03) X .3. = 28.825 (1.31)

X ..1 = 28.453 (-0.00) X ..2 = 28.453 (0.00)

X 11. = 29.008 (1.95) X 12. = 28.475 (0.08) X 13. = 28.075 (-1.33)
X 21. = 27.742 (-2.50) X 22. = 27.842 (-2.15) X 23. = 29.575 (3.94)

X 1.1 = 28.522 (0.24) X 1.2 = 28.517 (0.22) X 2.1 = 28.383 (-0.24) X 2.2 = 28.389 (-0.22)

X .11 = 28.367 (-0.30) X .12 = 28.383 (-0.24)
X .21 = 27.850 (-2.12) X .22 = 28.467 (0.05)
X .31 = 29.142 (2.42) X .32 = 28.508 (0.20)

X 111 = 28.683 (0.81) X 121 = 28.317 (-0.48) X 131 = 28.567 (0.40)
X 112 = 29.333 (3.09) X 122 = 28.633 (0.63) X 132 = 27.583 (-3.06)
X 211 = 28.050 (-1.42) X 221 = 27.383 (-3.76) X 231 = 29.717 (4.44)
X 212 = 27.433 (-3.58) X 222 = 28.300 (-0.54) X 232 = 29.433 (3.45)

X 11 = 32.783 (15.22) X 12 = 30.917 (8.66) X 13 = 28.275 (-0.62)
X 14 = 27.067 (-4.87) X 15 = 26.108 (-8.24) X 16 = 25.567 (-10.14)

X ■1 = 28.583 (0.46) X ■2 = 28.175 (-0.98) X ■3 = 29.117 (2.33)
X ■4 = 28.658 (0.72) X ■5 = 28.167 (-1.01) X ■6 = 28.017 (-1.53)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.90456E+00 (8.5)	2.49866E+01 (17.6)	6.87114E+00 (9.2)
VR2 (cv2%)	1.96567E+00 (4.9)	1.26233E+00 (3.9)	
VR3 (cv3%)	1.08960E+00 (3.7)	1.23027E+00 (3.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.49116E+01	4.59021E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.054 (0.188)	0.013 (0.093)	0.047 (0.174)
- DOSE	0.470 (0.364)	0.111 (0.105)	0.404 (0.323)
- AMENDEMENT*DOSE	2.135 (0.862)	0.505 (0.385)	1.835 (0.816)
- SUBSIDIAIRE	0.000 (0.005)	0.000 (0.005)	
- AMENDEMENT*SUBSIDIAIRE	0.001 (0.020)	0.000 (0.019)	
- DOSE*SUBSIDIAIRE	2.152 (0.864)	1.906 (0.832)	
- AMENDEM*DOSE*SUBSID	1.689 (0.796)	1.496 (0.758)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.103 (0.252)	0.030 (0.142)	
- DOSE	0.894 (0.418)	0.259 (0.224)	
- AMENDEMENT*DOSE	4.062 (0.977)	1.174 (0.682)	
- SUBSIDIAIRE	0.000 (0.005)	0.000 (0.005)	
- AMENDEMENT*SUBSIDIAIRE	0.000 (0.014)	0.000 (0.010)	
- DOSE*SUBSIDIAIRE	0.756 (0.479)	0.218 (0.193)	
- AMENDEM*DOSE*SUBSID	0.593 (0.439)	0.171 (0.156)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: RU0-20
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	14.900	17.800	15.700	17.000	17.800	18.200	11.800	13.500	14.500	13.700	18.400	18.100
X 12k	16.100	15.600	16.500	17.400	15.100	15.300	16.400	14.400	13.200	13.700	19.100	18.300
X 13k	16.000	16.900	17.200	19.400	14.000	13.400	15.500	14.200	14.200	13.400	14.500	14.700
X 21k	19.900	18.800	16.400	17.400	19.400	19.200	12.100	12.900	15.900	15.900	13.400	14.300
X 22k	18.800	17.000	18.300	18.000	18.600	14.600	14.400	14.400	13.500	13.300	16.400	20.000
X 23k	15.800	14.600	18.500	17.100	19.600	18.700	16.500	14.500	16.700	15.900	18.100	18.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 16.157

X 1.. = 15.719 (-2.71) X 2..= 16.594 (2.71)

X .1. = 16.125 (-0.20) X .2. = 16.183 (0.16) X .3. = 16.162 (0.03)

X ..1 = 16.200 (0.27) X ..2 = 16.114 (-0.27)

X 11. = 15.950 (-1.28) X 12. = 15.925 (-1.44) X 13. = 15.283 (-5.41)
X 21. = 16.300 (0.89) X 22. = 16.442 (1.76) X 23. = 17.042 (5.48)

X 1.1 = 15.606 (-3.41) X 1.2 = 15.833 (-2.00) X 2.1 = 16.794 (3.95) X 2.2 = 16.394 (1.47)

X .11 = 15.850 (-1.90) X .12 = 16.400 (1.50)
X .21 = 16.367 (1.30) X .22 = 16.000 (-0.97)
X .31 = 16.383 (1.40) X .32 = 15.942 (-1.33)

X 111 = 15.517 (-3.96) X 121 = 16.067 (-0.56) X 131 = 15.233 (-5.72)
X 112 = 16.383 (1.40) X 122 = 15.783 (-2.31) X 132 = 15.333 (-5.10)
X 211 = 16.183 (0.16) X 221 = 16.667 (3.15) X 231 = 17.533 (8.52)
X 212 = 16.417 (1.61) X 222 = 16.217 (0.37) X 232 = 16.550 (2.43)

X 11 = 16.850 (4.29) X 12 = 17.408 (7.75) X 13 = 16.992 (5.17)
X 14 = 14.217 (-12.01) X 15 = 14.492 (-10.31) X 16 = 16.983 (5.11)

X ■1 = 16.075 (-0.51) X ■2 = 15.550 (-3.76) X ■3 = 16.375 (1.35)
X ■4 = 16.900 (4.60) X ■5 = 15.900 (-1.59) X ■6 = 16.142 (-0.09)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.56947E+00 (14.6)	9.85241E+00 (19.4)	6.33722E+00 (15.6)
VR2 (cv2%)	1.11647E+00 (6.5)	1.65047E+00 (8.0)	
VR3 (cv3%)	9.94672E-01 (6.2)	8.87872E-01 (5.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.66220E+01	2.91573E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.474 (0.875)	1.399 (0.753)	2.175 (0.847)
- DOSE	0.004 (0.004)	0.002 (0.002)	0.003 (0.003)
- AMENDEMENT*DOSE	0.638 (0.459)	0.361 (0.294)	0.561 (0.416)
- SUBSIDIAIRE	0.120 (0.260)	0.081 (0.218)	
- AMENDEMENT*SUBSIDIAIRE	1.783 (0.809)	1.997 (0.833)	
- DOSE*SUBSIDIAIRE	1.839 (0.822)	2.060 (0.853)	
- AMENDEM*DOSE*SUBSID	0.317 (0.265)	0.355 (0.291)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.858 (0.970)	3.029 (0.916)	
- DOSE	0.007 (0.007)	0.005 (0.004)	
- AMENDEMENT*DOSE	1.252 (0.706)	0.781 (0.467)	
- SUBSIDIAIRE	0.047 (0.176)	0.029 (0.141)	
- AMENDEMENT*SUBSIDIAIRE	0.625 (0.439)	0.390 (0.458)	
- DOSE*SUBSIDIAIRE	0.645 (0.466)	0.402 (0.323)	
- AMENDEM*DOSE*SUBSID	0.111 (0.105)	0.069 (0.067)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: CO-20
unite : Pour mille

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	30.600	24.500	27.300	26.000	25.600	25.800	29.200	28.200	25.800	25.800	26.000	26.400
X 12k	21.800	23.800	23.300	25.700	24.200	24.300	21.200	27.100	25.600	22.400	25.600	24.500
X 13k	24.600	25.700	25.500	25.300	26.300	24.500	25.400	26.400	26.500	27.500	28.400	28.100
X 21k	25.700	26.600	22.800	23.800	23.100	25.700	28.000	29.100	22.500	22.800	26.200	28.500
X 22k	24.700	26.400	23.300	25.500	25.700	25.500	24.000	23.100	27.600	26.400	26.100	26.100
X 23k	26.700	28.600	22.300	25.300	24.600	26.900	20.400	26.100	24.800	24.600	26.200	26.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 25.519

X 1.. = 25.692 (0.67) X 2..= 25.347 (-0.67)

X .1. = 26.083 (2.21) X .2. = 24.746 (-3.03) X .3. = 25.729 (0.82)

X ..1 = 25.211 (-1.21) X ..2 = 25.828 (1.21)

X 11. = 26.767 (4.89) X 12. = 24.125 (-5.46) X 13. = 26.183 (2.60)
X 21. = 25.400 (-0.47) X 22. = 25.367 (-0.60) X 23. = 25.275 (-0.96)

X 1.1 = 25.717 (0.77) X 1.2 = 25.667 (0.58) X 2.1 = 24.706 (-3.19) X 2.2 = 25.989 (1.84)

X .11 = 26.067 (2.14) X .12 = 26.100 (2.27)
X .21 = 24.425 (-4.29) X .22 = 25.067 (-1.77)
X .31 = 25.142 (-1.48) X .32 = 26.317 (3.12)

X 111 = 27.417 (7.43) X 121 = 23.617 (-7.46) X 131 = 26.117 (2.34)
X 112 = 26.117 (2.34) X 122 = 24.633 (-3.47) X 132 = 26.250 (2.86)
X 211 = 24.717 (-3.15) X 221 = 25.233 (-1.12) X 231 = 24.167 (-5.30)
X 212 = 26.083 (2.21) X 222 = 25.500 (-0.08) X 232 = 26.383 (3.39)

X 11 = 25.808 (1.13) X 12 = 24.675 (-3.31) X 13 = 25.183 (-1.32)
X 14 = 25.683 (0.64) X 15 = 25.192 (-1.28) X 16 = 26.575 (4.14)

X m1 = 26.200 (2.67) X m2 = 25.750 (0.90) X m3 = 24.692 (-3.24)
X m4 = 25.383 (-0.53) X m5 = 25.550 (0.12) X m6 = 25.542 (0.09)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.21356E+00 (8.0)	4.66309E+00 (8.5)	4.53406E+00 (8.3)
VR2 (cv2%)	2.24167E+00 (5.9)	1.10333E+00 (4.1)	
VR3 (cv3%)	1.97400E+00 (5.5)	2.20167E+00 (5.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.22766E+00	4.94970E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.507 (0.490)	0.458 (0.489)	0.471 (0.493)
- DOSE	2.735 (0.917)	2.472 (0.897)	2.542 (0.903)
- AMENDEMENT*DOSE	2.762 (0.919)	2.495 (0.899)	2.566 (0.900)
- SUBSIDIAIRE	3.054 (0.860)	6.204 (0.946)	
- AMENDEMENT*SUBSIDIAIRE	4.053 (0.948)	3.634 (0.935)	
- DOSE*SUBSIDIAIRE	0.992 (0.387)	0.889 (0.426)	
- AMENDEM*DOSE*SUBSID	2.538 (0.902)	2.276 (0.878)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.737 (0.399)	0.694 (0.414)	
- DOSE	3.979 (0.976)	3.746 (0.970)	
- AMENDEMENT*DOSE	4.017 (0.977)	3.782 (0.971)	
- SUBSIDIAIRE	2.363 (0.873)	2.225 (0.862)	
- AMENDEMENT*SUBSIDIAIRE	2.762 (0.901)	2.600 (0.891)	
- DOSE*SUBSIDIAIRE	0.676 (0.482)	0.636 (0.462)	
- AMENDEM*DOSE*SUBSID	1.730 (0.814)	1.629 (0.795)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.380	1.860	2.140	2.060	2.070	2.010	2.180	2.220	2.120	2.050	2.160	2.220
X 12k	1.730	1.930	1.940	2.100	2.080	2.110	1.940	2.230	2.150	1.870	1.920	1.970
X 13k	2.040	2.110	2.060	2.060	2.120	2.050	1.980	1.920	2.140	2.040	2.280	2.260
X 21k	2.110	2.070	1.910	1.830	1.900	2.100	2.140	2.200	1.790	1.860	2.020	2.260
X 22k	2.050	2.030	2.040	2.140	2.000	2.050	1.930	1.950	1.950	1.960	2.110	2.130
X 23k	2.100	2.240	1.860	2.140	2.000	2.310	1.630	2.040	2.000	2.010	2.010	2.170

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.049

X 1.. = 2.069 (0.99) X 2..= 2.029 (-0.99)

X .1. = 2.069 (0.98) X .2. = 2.013 (-1.77) X .3. = 2.065 (0.79)

X ..1 = 2.027 (-1.07) X ..2 = 2.071 (1.07)

X 11. = 2.122 (3.58) X 12. = 1.997 (-2.52) X 13. = 2.088 (1.91)
X 21. = 2.016 (-1.63) X 22. = 2.028 (-1.02) X 23. = 2.042 (-0.33)

X 1.1 = 2.079 (1.48) X 1.2 = 2.059 (0.50) X 2.1 = 1.975 (-3.62) X 2.2 = 2.083 (1.64)

X .11 = 2.077 (1.34) X .12 = 2.062 (0.61)
X .21 = 1.987 (-3.05) X .22 = 2.039 (-0.49)
X .31 = 2.018 (-1.50) X .32 = 2.112 (3.09)

X 111 = 2.175 (6.14) X 121 = 1.960 (-4.35) X 131 = 2.103 (2.64)
X 112 = 2.070 (1.02) X 122 = 2.035 (-0.69) X 132 = 2.073 (1.18)
X 211 = 1.978 (-3.46) X 221 = 2.013 (-1.75) X 231 = 1.933 (-5.65)
X 212 = 2.053 (0.20) X 222 = 2.043 (-0.28) X 232 = 2.152 (5.00)

X 11 = 2.054 (0.24) X 12 = 2.023 (-1.26) X 13 = 2.067 (0.85)
X 14 = 2.030 (-0.94) X 15 = 1.995 (-2.64) X 16 = 2.126 (3.74)

X m1 = 2.086 (1.79) X m2 = 2.082 (1.59) X m3 = 1.964 (-4.15)
X m4 = 2.016 (-1.63) X m5 = 2.043 (-0.28) X m6 = 2.104 (2.68)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.12467E-02 (7.1)	1.95100E-02 (6.8)	1.82808E-02 (6.6)
VR2 (cv2%)	1.56022E-02 (6.1)	1.89889E-03 (2.1)	
VR3 (cv3%)	9.50222E-03 (4.8)	1.22429E-02 (5.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.46021E+00	6.80820E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.393 (0.752)	1.517 (0.772)	1.619 (0.784)
- DOSE	1.117 (0.656)	1.217 (0.687)	1.298 (0.710)
- AMENDEMENT*DOSE	1.341 (0.721)	1.460 (0.750)	1.558 (0.766)
- SUBSIDIAIRE	2.222 (0.805)	18.259 (0.991)	
- AMENDEMENT*SUBSIDIAIRE	7.732 (0.990)	6.001 (0.980)	
- DOSE*SUBSIDIAIRE	1.916 (0.833)	1.487 (0.756)	
- AMENDEM*DOSE*SUBSID	3.719 (0.962)	2.886 (0.927)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.999 (0.840)	2.097 (0.850)	
- DOSE	1.603 (0.790)	1.682 (0.805)	
- AMENDEMENT*DOSE	1.923 (0.845)	2.018 (0.858)	
- SUBSIDIAIRE	2.341 (0.872)	2.456 (0.881)	
- AMENDEMENT*SUBSIDIAIRE	4.961 (0.971)	5.205 (0.975)	
- DOSE*SUBSIDIAIRE	1.230 (0.699)	1.290 (0.716)	
- AMENDEM*DOSE*SUBSID	2.386 (0.900)	2.503 (0.910)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	12.857	13.172	12.757	12.621	12.367	12.836	13.394	12.703	12.170	12.585	12.037	11.892
X 12k	12.601	12.332	12.010	12.238	11.635	11.517	10.928	12.152	11.907	11.979	13.333	12.437
X 13k	12.059	12.180	12.379	12.282	12.406	11.951	12.828	13.750	12.383	13.480	12.456	12.434
X 21k	12.180	12.850	11.937	13.005	12.158	12.238	13.084	13.227	12.570	12.258	12.970	12.611
X 22k	12.049	13.005	11.422	11.916	12.850	12.439	12.435	11.846	14.154	13.469	12.370	12.254
X 23k	12.714	12.768	11.989	11.822	12.300	11.645	12.515	12.794	12.400	12.239	13.035	12.330

2 - MOYENNES ET ECARTS RELATIFS

X ... = 12.457

X 1.. = 12.418 (-0.31) X 2..= 12.496 (0.31)

X .1. = 12.603 (1.17) X .2. = 12.303 (-1.24) X .3. = 12.465 (0.06)

X ..1 = 12.434 (-0.18) X ..2 = 12.480 (0.18)

X 11. = 12.616 (1.27) X 12. = 12.089 (-2.96) X 13. = 12.549 (0.74)
X 21. = 12.591 (1.07) X 22. = 12.517 (0.48) X 23. = 12.381 (-0.61)

X 1.1 = 12.362 (-0.77) X 1.2 = 12.474 (0.14) X 2.1 = 12.507 (0.40) X 2.2 = 12.485 (0.23)

X .11 = 12.540 (0.67) X .12 = 12.667 (1.68)
X .21 = 12.308 (-1.20) X .22 = 12.299 (-1.27)
X .31 = 12.455 (-0.01) X .32 = 12.475 (0.14)

X 111 = 12.597 (1.12) X 121 = 12.069 (-3.12) X 131 = 12.418 (-0.31)
X 112 = 12.635 (1.43) X 122 = 12.109 (-2.80) X 132 = 12.679 (1.78)
X 211 = 12.483 (0.21) X 221 = 12.547 (0.72) X 231 = 12.492 (0.28)
X 212 = 12.698 (1.94) X 222 = 12.488 (0.25) X 232 = 12.270 (-1.50)

X 11 = 12.564 (0.86) X 12 = 12.198 (-2.08) X 13 = 12.195 (-2.10)
X 14 = 12.638 (1.45) X 15 = 12.633 (1.41) X 16 = 12.515 (0.46)

X m1 = 12.577 (0.96) X m2 = 12.359 (-0.78) X m3 = 12.573 (0.93)
X m4 = 12.603 (1.17) X m5 = 12.497 (0.32) X m6 = 12.134 (-2.60)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.67606E-01 (5.5)	4.91378E-01 (5.6)	4.85775E-01 (5.6)
VR2 (cv2%)	2.14567E-01 (3.7)	1.26908E-01 (2.9)	
VR3 (cv3%)	1.52127E-01 (3.1)	1.69659E-01 (3.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.82691E+00	7.35387E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.236 (0.364)	0.225 (0.356)	0.228 (0.357)
- DOSE	1.159 (0.669)	1.103 (0.652)	1.115 (0.656)
- AMENDEMENT*DOSE	1.244 (0.695)	1.184 (0.677)	1.197 (0.677)
- SUBSIDIAIRE	0.174 (0.306)	0.293 (0.386)	
- AMENDEMENT*SUBSIDIAIRE	0.538 (0.477)	0.482 (0.500)	
- DOSE*SUBSIDIAIRE	0.202 (0.180)	0.181 (0.163)	
- AMENDEM*DOSE*SUBSID	1.086 (0.646)	0.974 (0.393)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.389 (0.457)	0.376 (0.451)	
- DOSE	1.904 (0.842)	1.842 (0.833)	
- AMENDEMENT*DOSE	2.044 (0.862)	1.978 (0.853)	
- SUBSIDIAIRE	0.131 (0.280)	0.127 (0.276)	
- AMENDEMENT*SUBSIDIAIRE	0.288 (0.399)	0.278 (0.394)	
- DOSE*SUBSIDIAIRE	0.108 (0.102)	0.104 (0.099)	
- AMENDEM*DOSE*SUBSID	0.581 (0.432)	0.562 (0.421)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.300	4.200	4.700	4.500	4.400	4.400	5.000	4.900	4.400	4.400	4.500	4.600
X 12k	3.800	4.100	4.000	4.400	4.200	4.200	3.700	4.700	4.400	3.900	4.400	4.200
X 13k	4.200	4.400	4.400	4.400	4.500	4.200	4.400	4.600	4.600	4.700	4.900	4.800
X 21k	4.400	4.600	3.900	4.100	4.000	4.400	4.800	5.000	3.900	3.900	4.500	4.900
X 22k	4.300	4.600	4.000	4.400	4.400	4.400	4.100	4.000	4.800	4.600	4.500	4.500
X 23k	4.600	4.900	3.800	4.400	4.200	4.600	3.500	4.500	4.300	4.200	4.500	4.600

2 - MOYENNES ET ECARTS RELATIFS

X ... = 4.396

X 1.. = 4.428 (0.73) X 2..= 4.364 (-0.73)

X .1. = 4.487 (2.09) X .2. = 4.275 (-2.75) X .3. = 4.425 (0.66)

X ..1 = 4.342 (-1.23) X ..2 = 4.450 (1.23)

X 11. = 4.608 (4.83) X 12. = 4.167 (-5.21) X 13. = 4.508 (2.56)
X 21. = 4.367 (-0.66) X 22. = 4.383 (-0.28) X 23. = 4.342 (-1.23)

X 1.1 = 4.433 (0.85) X 1.2 = 4.422 (0.60) X 2.1 = 4.250 (-3.32) X 2.2 = 4.478 (1.86)

X .11 = 4.483 (1.99) X .12 = 4.492 (2.18)
X .21 = 4.217 (-4.08) X .22 = 4.333 (-1.42)
X .31 = 4.325 (-1.61) X .32 = 4.525 (2.94)

X 111 = 4.717 (7.30) X 121 = 4.083 (-7.11) X 131 = 4.500 (2.37)
X 112 = 4.500 (2.37) X 122 = 4.250 (-3.32) X 132 = 4.517 (2.75)
X 211 = 4.250 (-3.32) X 221 = 4.350 (-1.04) X 231 = 4.150 (-5.59)
X 212 = 4.483 (1.99) X 222 = 4.417 (0.47) X 232 = 4.533 (3.13)

X 11 = 4.450 (1.23) X 12 = 4.250 (-3.32) X 13 = 4.325 (-1.61)
X 14 = 4.433 (0.85) X 15 = 4.342 (-1.23) X 16 = 4.575 (4.08)

X m1 = 4.525 (2.94) X m2 = 4.433 (0.85) X m3 = 4.250 (-3.32)
X m4 = 4.367 (-0.66) X m5 = 4.400 (0.09) X m6 = 4.400 (0.09)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.25783E-01 (8.1)	1.37983E-01 (8.5)	1.33083E-01 (8.3)
VR2 (cv2%)	8.55833E-02 (6.7)	2.92500E-02 (3.9)	
VR3 (cv3%)	5.65833E-02 (5.4)	6.78500E-02 (5.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.40446E+00	5.03199E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.584 (0.458)	0.532 (0.479)	0.552 (0.472)
- DOSE	2.276 (0.878)	2.075 (0.855)	2.151 (0.864)
- AMENDEMENT*DOSE	2.883 (0.927)	2.628 (0.910)	2.725 (0.912)
- SUBSIDIAIRE	2.468 (0.824)	7.222 (0.957)	
- AMENDEMENT*SUBSIDIAIRE	4.539 (0.959)	3.785 (0.940)	
- DOSE*SUBSIDIAIRE	0.979 (0.392)	0.817 (0.457)	
- AMENDEM*DOSE*SUBSID	2.329 (0.884)	1.943 (0.837)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.843 (0.366)	0.798 (0.380)	
- DOSE	3.284 (0.956)	3.110 (0.948)	
- AMENDEMENT*DOSE	4.160 (0.979)	3.940 (0.975)	
- SUBSIDIAIRE	2.424 (0.878)	2.295 (0.868)	
- AMENDEMENT*SUBSIDIAIRE	2.946 (0.912)	2.790 (0.903)	
- DOSE*SUBSIDIAIRE	0.636 (0.462)	0.602 (0.444)	
- AMENDEM*DOSE*SUBSID	1.512 (0.771)	1.432 (0.753)	

ANALYSE DE VARIANCE — INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/94
parametre: PAO
unite : ppm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	33.000	14.000	14.000	19.000	14.000	14.000	13.000	15.000	13.000	10.000	14.000	15.000
X 12k	14.000	20.000	15.000	22.000	19.000	19.000	16.000	20.000	9.000	10.000	14.000	12.000
X 13k	18.000	19.000	18.000	12.000	18.000	16.000	14.000	14.000	9.000	8.000	12.000	10.000
X 21k	25.000	24.000	12.000	12.000	15.000	14.000	9.000	14.000	9.000	9.000	11.000	14.000
X 22k	22.000	21.000	15.000	21.000	13.000	18.000	14.000	15.000	16.000	17.000	13.000	15.000
X 23k	29.000	54.000	7.000	21.000	15.000	19.000	10.000	17.000	8.000	14.000	18.000	14.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 15.833

X 1.. = 15.167 (-4.21) X 2..= 16.500 (4.21)

X .1. = 14.833 (-6.32) X .2. = 16.250 (2.63) X .3. = 16.417 (3.68)

X ..1 = 14.944 (-5.61) X ..2 = 16.722 (5.61)

X 11. = 15.667 (-1.05) X 12. = 15.833 (0.00) X 13. = 14.000 (-11.58)
X 21. = 14.000 (-11.58) X 22. = 16.667 (5.26) X 23. = 18.833 (18.95)

X 1.1 = 15.389 (-2.81) X 1.2 = 14.944 (-5.61) X 2.1 = 14.500 (-8.42) X 2.2 = 18.500 (16.84)

X .11 = 15.167 (-4.21) X .12 = 14.500 (-8.42)
X .21 = 15.000 (-5.26) X .22 = 17.500 (10.53)
X .31 = 14.667 (-7.37) X .32 = 18.167 (14.74)

X 111 = 16.833 (6.32) X 121 = 14.500 (-8.42) X 131 = 14.833 (-6.32)
X 112 = 14.500 (-8.42) X 122 = 17.167 (8.42) X 132 = 13.167 (-16.84)
X 211 = 13.500 (-14.74) X 221 = 15.500 (-2.11) X 231 = 14.500 (-8.42)
X 212 = 14.500 (-8.42) X 222 = 17.833 (12.63) X 232 = 23.167 (46.32)

X 11 = 24.417 (54.21) X 12 = 15.667 (-1.05) X 13 = 16.167 (2.11)
X 14 = 14.250 (-10.00) X 15 = 11.000 (-30.53) X 16 = 13.500 (-14.74)

X m1 = 17.083 (7.89) X m2 = 17.917 (13.16) X m3 = 13.167 (-16.84)
X m4 = 15.417 (-2.63) X m5 = 16.000 (1.05) X m6 = 15.417 (-2.63)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.36867E+01 (36.7)	7.77200E+01 (55.7)	3.40750E+01 (36.9)
VR2 (cv2%)	8.35556E+00 (18.8)	1.76222E+01 (26.5)	
VR3 (cv3%)	1.84822E+01 (27.2)	1.67289E+01 (25.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.72982E+00	1.34959E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.950 (0.341)	0.412 (0.466)	0.939 (0.346)
- DOSE	0.539 (0.405)	0.234 (0.204)	0.533 (0.402)
- AMENDEMENT*DOSE	1.915 (0.833)	0.830 (0.451)	1.893 (0.825)
- SUBSIDIAIRE	6.424 (0.949)	3.228 (0.869)	
- AMENDEMENT*SUBSIDIAIRE	4.809 (0.964)	5.313 (0.972)	
- DOSE*SUBSIDIAIRE	1.536 (0.766)	1.697 (0.798)	
- AMENDEM*DOSE*SUBSID	2.384 (0.889)	2.634 (0.910)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.356 (0.752)	0.776 (0.386)	
- DOSE	0.770 (0.473)	0.441 (0.348)	
- AMENDEMENT*DOSE	2.733 (0.927)	1.565 (0.782)	
- SUBSIDIAIRE	2.410 (0.877)	1.380 (0.756)	
- AMENDEMENT*SUBSIDIAIRE	3.766 (0.945)	2.157 (0.855)	
- DOSE*SUBSIDIAIRE	1.203 (0.691)	0.689 (0.489)	
- AMENDEM*DOSE*SUBSID	1.867 (0.837)	1.069 (0.648)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: PT
unite : ppm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	470.000	470.000	420.000	470.000	390.000	430.000	360.000	420.000	430.000	420.000	400.000	440.000
X 12k	330.000	400.000	370.000	390.000	360.000	370.000	390.000	460.000	460.000	400.000	400.000	380.000
X 13k	410.000	410.000	400.000	410.000	380.000	380.000	350.000	380.000	470.000	450.000	500.000	540.000
X 21k	430.000	440.000	340.000	350.000	360.000	410.000	470.000	520.000	340.000	360.000	420.000	490.000
X 22k	420.000	420.000	350.000	390.000	380.000	380.000	370.000	370.000	440.000	440.000	410.000	410.000
X 23k	440.000	490.000	320.000	420.000	370.000	440.000	240.000	460.000	370.000	400.000	400.000	440.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 408.472

X 1.. = 414.167 (1.39) X 2..= 402.778 (-1.39)

X .1. = 418.750 (2.52) X .2. = 395.417 (-3.20) X .3. = 411.250 (0.68)

X ..1 = 393.333 (-3.71) X ..2 = 423.611 (3.71)

X 11. = 426.667 (4.45) X 12. = 392.500 (-3.91) X 13. = 423.333 (3.64)
X 21. = 410.833 (0.58) X 22. = 378.333 (-2.48) X 23. = 399.167 (-2.28)

X 1.1 = 405.000 (-0.85) X 1.2 = 423.333 (3.64) X 2.1 = 381.667 (-6.56) X 2.2 = 423.889 (3.77)

X .11 = 402.500 (-1.46) X .12 = 435.000 (6.49)
X .21 = 390.000 (-4.52) X .22 = 400.833 (-1.87)
X .31 = 387.500 (-5.13) X .32 = 435.000 (6.49)

X 111 = 411.667 (0.78) X 121 = 385.000 (-5.75) X 131 = 418.333 (2.41)
X 112 = 441.667 (8.13) X 122 = 400.000 (-2.07) X 132 = 428.333 (4.86)
X 211 = 393.333 (-3.71) X 221 = 395.000 (-3.30) X 231 = 356.667 (-12.68)
X 212 = 428.333 (4.86) X 222 = 401.667 (-1.67) X 232 = 441.667 (8.13)

X 11 = 427.500 (4.66) X 12 = 385.833 (-5.54) X 13 = 387.500 (-5.13)
X 14 = 399.167 (-2.28) X 15 = 415.000 (1.60) X 16 = 435.833 (6.70)

X m1 = 433.333 (6.09) X m2 = 435.833 (6.70) X m3 = 390.000 (-4.52)
X m4 = 394.167 (-3.50) X m5 = 390.000 (-4.52) X m6 = 407.500 (-0.24)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.37806E+03 (14.2)	3.34806E+03 (14.2)	2.86972E+03 (13.1)
VR2 (cv2%)	1.93472E+03 (10.8)	5.04722E+02 (5.5)	
VR3 (cv3%)	5.88722E+02 (5.9)	8.74722E+02 (7.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.53701E+01	1.21844E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.691 (0.419)	0.697 (0.417)	0.814 (0.381)
- DOSE	1.008 (0.619)	1.017 (0.622)	1.187 (0.678)
- AMENDEMENT*DOSE	0.426 (0.337)	0.430 (0.339)	0.501 (0.382)
- SUBSIDIAIRE	8.529 (0.967)	32.694 (0.997)	
- AMENDEMENT*SUBSIDIAIRE	4.362 (0.955)	2.936 (0.905)	
- DOSE*SUBSIDIAIRE	3.463 (0.954)	2.331 (0.884)	
- AMENDEM*DOSE*SUBSID	5.105 (0.986)	3.436 (0.953)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.270 (0.736)	1.278 (0.737)	
- DOSE	1.852 (0.834)	1.864 (0.836)	
- AMENDEMENT*DOSE	0.782 (0.467)	0.798 (0.464)	
- SUBSIDIAIRE	8.973 (0.996)	9.032 (0.996)	
- AMENDEMENT*SUBSIDIAIRE	1.396 (0.759)	1.406 (0.760)	
- DOSE*SUBSIDIAIRE	1.109 (0.661)	1.116 (0.664)	
- AMENDEM*DOSE*SUBSID	1.634 (0.796)	1.645 (0.798)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: K0-20
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.290	0.250	0.260	0.310	0.250	0.270	0.270	0.260	0.210	0.220	0.270	0.290
X 12k	0.270	0.230	0.230	0.360	0.200	0.210	0.340	0.440	0.200	0.150	0.240	0.250
X 13k	0.260	0.250	0.280	0.250	0.240	0.240	0.250	0.260	0.190	0.210	0.410	0.300
X 21k	0.290	0.320	0.260	0.290	0.230	0.260	0.250	0.250	0.200	0.240	0.260	0.300
X 22k	0.350	0.310	0.230	0.310	0.250	0.280	0.250	0.260	0.230	0.250	0.290	0.380
X 23k	0.350	0.500	0.230	0.190	0.250	0.270	0.250	0.440	0.240	0.180	0.310	0.320

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.271

X 1.. = 0.261 (-3.39) X 2..= 0.280 (3.39)

X .1. = 0.262 (-2.98) X .2. = 0.271 (0.26) X .3. = 0.278 (2.72)

X ..1 = 0.261 (-3.70) X ..2 = 0.281 (3.70)

X 11. = 0.262 (-2.98) X 12. = 0.260 (-3.90) X 13. = 0.262 (-3.29)
X 21. = 0.262 (-2.98) X 22. = 0.283 (4.41) X 23. = 0.294 (8.73)

X 1.1 = 0.259 (-4.31) X 1.2 = 0.264 (-2.46) X 2.1 = 0.262 (-3.08) X 2.2 = 0.297 (9.86)

X .11 = 0.253 (-6.37) X .12 = 0.272 (0.41)
X .21 = 0.257 (-5.13) X .22 = 0.286 (5.65)
X .31 = 0.272 (0.41) X .32 = 0.284 (5.03)

X 111 = 0.258 (-4.52) X 121 = 0.247 (-8.83) X 131 = 0.272 (0.41)
X 112 = 0.267 (-1.44) X 122 = 0.273 (1.03) X 132 = 0.252 (-6.98)
X 211 = 0.248 (-8.21) X 221 = 0.267 (-1.44) X 231 = 0.272 (0.41)
X 212 = 0.277 (2.26) X 222 = 0.298 (10.27) X 232 = 0.317 (17.04)

X 11 = 0.306 (13.04) X 12 = 0.267 (-1.44) X 13 = 0.246 (-9.14)
X 14 = 0.293 (8.42) X 15 = 0.210 (-22.38) X 16 = 0.302 (11.50)

X m1 = 0.284 (5.03) X m2 = 0.290 (7.19) X m3 = 0.277 (2.57)
X m4 = 0.249 (-7.91) X m5 = 0.277 (2.57) X m6 = 0.245 (-9.45)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c=1%)	4.06556E-03 (23.6)	6.58756E-03 (30.0)	4.01972E-03 (23.4)
VR2 (c=2%)	1.17667E-03 (12.7)	8.20000E-04 (10.6)	
VR3 (c=3%)	1.91533E-03 (16.2)	1.98667E-03 (16.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.38245E+00	1.11804E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.488 (0.768)	0.918 (0.349)	1.505 (0.768)
- DOSE	0.353 (0.289)	0.218 (0.192)	0.357 (0.292)
- AMENDEMENT*DOSE	0.409 (0.326)	0.252 (0.218)	0.414 (0.328)
- SUBSIDIAIRE	6.119 (0.945)	8.780 (0.969)	
- AMENDEMENT*SUBSIDIAIRE	2.115 (0.845)	2.039 (0.837)	
- DOSE*SUBSIDIAIRE	0.224 (0.197)	0.216 (0.191)	
- AMENDEM*DOSE*SUBSID	0.764 (0.481)	0.736 (0.493)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.239 (0.863)	1.631 (0.795)	
- DOSE	0.531 (0.403)	0.387 (0.313)	
- AMENDEMENT*DOSE	0.615 (0.451)	0.448 (0.353)	
- SUBSIDIAIRE	2.665 (0.895)	1.941 (0.834)	
- AMENDEMENT*SUBSIDIAIRE	1.499 (0.776)	1.092 (0.698)	
- DOSE*SUBSIDIAIRE	0.159 (0.146)	0.116 (0.109)	
- AMENDEM*DOSE*SUBSID	0.541 (0.409)	0.394 (0.318)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: NAO-20
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.620	0.920	0.500	0.430	0.390	0.460	0.340	0.360	0.240	0.220	0.240	0.330
X 12k	0.470	0.480	0.380	0.430	0.330	0.410	0.300	0.300	0.390	0.230	0.240	0.360
X 13k	0.360	0.370	0.370	0.490	0.370	0.320	0.300	0.350	0.220	0.190	0.290	0.260
X 21k	0.420	0.490	0.440	0.440	0.360	0.500	0.220	0.220	0.250	0.320	0.240	0.310
X 22k	0.230	0.200	0.410	0.380	0.430	0.400	0.320	0.340	0.270	0.290	0.260	0.310
X 23k	0.410	0.490	0.370	0.470	0.410	0.410	0.330	0.390	0.300	0.350	0.320	0.240

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.358

X 1.. = 0.368 (2.91) X 2..= 0.347 (-2.91)

X .1. = 0.386 (7.80) X .2. = 0.340 (-5.01) X .3. = 0.348 (-2.79)

X ..1 = 0.342 (-4.46) X ..2 = 0.374 (4.46)

X 11. = 0.421 (17.58) X 12. = 0.360 (0.58) X 13. = 0.324 (-9.43)
X 21. = 0.351 (-1.98) X 22. = 0.320 (-10.59) X 23. = 0.372 (3.84)

X 1.1 = 0.353 (-1.44) X 1.2 = 0.384 (7.26) X 2.1 = 0.331 (-7.49) X 2.2 = 0.364 (1.67)

X .11 = 0.355 (-0.81) X .12 = 0.417 (16.41)
X .21 = 0.336 (-6.17) X .22 = 0.344 (-3.84)
X .31 = 0.335 (-6.40) X .32 = 0.361 (0.81)

X 111 = 0.388 (8.50) X 121 = 0.352 (-1.75) X 131 = 0.318 (-11.06)
X 112 = 0.453 (26.66) X 122 = 0.368 (2.91) X 132 = 0.330 (-7.80)
X 211 = 0.322 (-10.13) X 221 = 0.320 (-10.59) X 231 = 0.352 (-1.75)
X 212 = 0.380 (6.17) X 222 = 0.320 (-10.59) X 232 = 0.392 (9.43)

X 11 = 0.455 (27.12) X 12 = 0.426 (18.98) X 13 = 0.399 (11.53)
X 14 = 0.312 (-12.92) X 15 = 0.273 (-23.86) X 16 = 0.283 (-20.84)

X m1 = 0.411 (14.78) X m2 = 0.377 (5.24) X m3 = 0.363 (1.28)
X m4 = 0.357 (-0.12) X m5 = 0.313 (-12.46) X m6 = 0.327 (-8.73)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.25138E-02 (31.3)	2.43218E-02 (43.6)	1.19600E-02 (30.6)
VR2 (cv2%)	2.19806E-03 (13.1)	3.34472E-03 (16.2)	
VR3 (cv3%)	3.45739E-03 (16.4)	3.22806E-03 (15.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.09844E+01	2.26992E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.624 (0.443)	0.321 (0.418)	0.653 (0.434)
- DOSE	1.151 (0.667)	0.592 (0.435)	1.204 (0.683)
- AMENDEMENT*DOSE	1.787 (0.813)	0.919 (0.414)	1.870 (0.821)
- SUBSIDIAIRE	8.357 (0.966)	5.492 (0.935)	
- AMENDEMENT*SUBSIDIAIRE	0.004 (0.049)	0.004 (0.050)	
- DOSE*SUBSIDIAIRE	1.283 (0.705)	1.374 (0.729)	
- AMENDEM*DOSE*SUBSID	0.242 (0.211)	0.259 (0.224)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.123 (0.706)	0.669 (0.423)	
- DOSE	2.071 (0.865)	1.234 (0.700)	
- AMENDEMENT*DOSE	3.216 (0.953)	1.915 (0.844)	
- SUBSIDIAIRE	2.641 (0.893)	1.573 (0.787)	
- AMENDEMENT*SUBSIDIAIRE	0.002 (0.035)	0.001 (0.027)	
- DOSE*SUBSIDIAIRE	0.638 (0.463)	0.380 (0.309)	
- AMENDEM*DOSE*SUBSID	0.120 (0.113)	0.072 (0.070)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: CAO-20
unite : meq/100g

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.000	5.700	4.900	5.100	4.700	4.800	4.300	5.000	4.500	4.200	3.700	3.600
X 12k	4.300	4.900	5.000	5.100	4.300	5.100	4.000	4.200	4.200	4.500	3.800	4.000
X 13k	4.800	4.300	4.900	4.700	3.400	5.000	5.100	5.600	4.600	4.700	3.600	3.500
X 21k	4.600	4.800	4.800	5.100	5.000	4.800	4.700	4.500	4.900	4.500	3.500	3.800
X 22k	4.700	4.500	4.600	4.400	4.800	4.300	4.200	4.000	4.800	3.900	3.700	4.000
X 23k	4.900	5.500	4.700	4.600	5.000	5.100	4.100	4.200	4.800	4.600	4.000	3.700

2 - MOYENNES ET ECARTS RELATIFS

X ... = 4.531

X 1.. = 4.558 (0.61) X 2..= 4.503 (-0.61)

X .1. = 4.646 (2.34) X .2. = 4.387 (-3.16) X .3. = 4.558 (0.61)

X ..1 = 4.497 (-0.74) X ..2 = 4.564 (0.74)

X 11. = 4.708 (3.92) X 12. = 4.450 (-1.78) X 13. = 4.517 (-0.31)
X 21. = 4.583 (1.16) X 22. = 4.325 (-4.54) X 23. = 4.600 (1.53)

X 1.1 = 4.450 (-1.78) X 1.2 = 4.667 (3.00) X 2.1 = 4.544 (0.31) X 2.2 = 4.461 (-1.53)

X .11 = 4.633 (2.27) X .12 = 4.658 (2.82)
X .21 = 4.367 (-3.62) X .22 = 4.408 (-2.70)
X .31 = 4.492 (-0.86) X .32 = 4.625 (2.08)

X 111 = 4.683 (3.37) X 121 = 4.267 (-5.82) X 131 = 4.400 (-2.88)
X 112 = 4.733 (4.48) X 122 = 4.633 (2.27) X 132 = 4.633 (2.27)
X 211 = 4.583 (1.16) X 221 = 4.467 (-1.41) X 231 = 4.583 (1.16)
X 212 = 4.583 (1.16) X 222 = 4.183 (-7.66) X 232 = 4.617 (1.90)

X 11 = 4.917 (8.52) X 12 = 4.825 (6.50) X 13 = 4.692 (3.56)
X 14 = 4.492 (-0.86) X 15 = 4.517 (-0.31) X 16 = 3.742 (-17.41)

X m1 = 4.633 (2.27) X m2 = 4.517 (-0.31) X m3 = 4.492 (-0.86)
X m4 = 4.583 (1.16) X m5 = 4.508 (-0.49) X m6 = 4.450 (-1.78)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.35422E-01 (10.7)	6.50022E-01 (17.8)	2.81056E-01 (11.7)
VR2 (cv2%)	1.01333E-01 (7.0)	7.83333E-02 (6.2)	
VR3 (cv3%)	9.26000E-02 (6.7)	9.72000E-02 (6.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.98104E+00	2.11414E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.236 (0.364)	0.085 (0.231)	0.198 (0.335)
- DOSE	1.760 (0.809)	0.637 (0.458)	1.474 (0.753)
- AMENDEMENT*DOSE	0.369 (0.300)	0.134 (0.124)	0.309 (0.258)
- SUBSIDIAIRE	0.789 (0.418)	1.021 (0.640)	
- AMENDEMENT*SUBSIDIAIRE	4.374 (0.956)	4.167 (0.951)	
- DOSE*SUBSIDIAIRE	0.220 (0.194)	0.210 (0.186)	
- AMENDEM*DOSE*SUBSID	1.579 (0.775)	1.505 (0.760)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.369 (0.447)	0.176 (0.320)	
- DOSE	2.751 (0.928)	1.309 (0.722)	
- AMENDEMENT*DOSE	0.576 (0.429)	0.274 (0.235)	
- SUBSIDIAIRE	0.531 (0.476)	0.253 (0.377)	
- AMENDEMENT*SUBSIDIAIRE	2.689 (0.897)	1.280 (0.738)	
- DOSE*SUBSIDIAIRE	0.136 (0.126)	0.065 (0.063)	
- AMENDEM*DOSE*SUBSID	0.971 (0.388)	0.462 (0.362)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: MGO-20
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	47.000	46.400	45.200	44.600	42.200	42.700	35.200	39.700	42.000	42.000	40.700	40.900
X 12k	46.500	47.100	45.100	44.600	44.600	49.000	41.200	41.000	35.200	39.600	40.300	42.200
X 13k	44.600	44.600	40.300	44.800	33.200	32.100	44.500	42.100	39.800	35.200	34.200	30.500
X 21k	44.200	44.600	45.100	45.000	44.200	44.200	35.100	37.500	42.300	44.400	35.500	31.800
X 22k	44.500	44.200	44.100	45.900	43.600	41.200	44.300	44.400	39.700	41.900	38.100	41.300
X 23k	47.100	49.300	44.100	43.600	45.200	45.500	42.100	38.900	40.900	44.800	39.500	38.100

2 - MOYENNES ET ECARTS RELATIFS

X ... = 41.904

X 1.. = 41.414 (-1.17) X 2..= 42.394 (1.17)

X .1. = 41.771 (-0.32) X .2. = 42.900 (2.38) X .3. = 41.042 (-2.06)

X ..1 = 41.706 (-0.47) X ..2 = 42.103 (0.47)

X 11. = 42.383 (1.14) X 12. = 43.033 (2.69) X 13. = 38.825 (-7.35)
X 21. = 41.158 (-1.78) X 22. = 42.767 (2.06) X 23. = 43.258 (3.23)

X 1.1 = 41.211 (-1.65) X 1.2 = 41.617 (-0.69) X 2.1 = 42.200 (0.71) X 2.2 = 42.589 (1.63)

X .11 = 41.558 (-0.83) X .12 = 41.983 (0.19)
X .21 = 42.267 (0.87) X .22 = 43.533 (3.89)
X .31 = 41.292 (-1.46) X .32 = 40.792 (-2.65)

X 111 = 42.050 (0.35) X 121 = 42.150 (0.59) X 131 = 39.433 (-5.90)
X 112 = 42.717 (1.94) X 122 = 43.917 (4.80) X 132 = 38.217 (-8.80)
X 211 = 41.067 (-2.00) X 221 = 42.383 (1.14) X 231 = 43.150 (2.97)
X 212 = 41.250 (-1.56) X 222 = 43.150 (2.97) X 232 = 43.367 (3.49)

X 11 = 45.842 (9.40) X 12 = 44.367 (5.38) X 13 = 42.308 (0.96)
X 14 = 40.500 (-3.35) X 15 = 40.650 (-2.99) X 16 = 37.758 (-9.89)

X m1 = 41.692 (-0.51) X m2 = 41.900 (-0.01) X m3 = 42.000 (0.23)
X m4 = 42.867 (2.30) X m5 = 40.242 (-3.97) X m6 = 42.725 (1.96)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.73172E+01 (9.9)	3.55790E+01 (14.2)	1.89955E+01 (10.4)
VR2 (cv2%)	1.21581E+00 (2.6)	2.86781E+00 (4.0)	
VR3 (cv3%)	3.21334E+00 (4.3)	2.88294E+00 (4.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.98219E+01	3.38093E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.999 (0.328)	0.486 (0.499)	0.911 (0.353)
- DOSE	1.215 (0.686)	0.591 (0.434)	1.108 (0.653)
- AMENDEMENT*DOSE	3.177 (0.942)	1.547 (0.768)	2.897 (0.923)
- SUBSIDIAIRE	2.336 (0.814)	0.990 (0.367)	
- AMENDEMENT*SUBSIDIAIRE	0.000 (0.018)	0.000 (0.019)	
- DOSE*SUBSIDIAIRE	1.458 (0.749)	1.625 (0.784)	
- AMENDEM*DOSE*SUBSID	0.767 (0.479)	0.855 (0.441)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.000 (0.840)	1.084 (0.697)	
- DOSE	2.431 (0.904)	1.318 (0.724)	
- AMENDEMENT*DOSE	6.358 (0.996)	3.448 (0.962)	
- SUBSIDIAIRE	0.328 (0.424)	0.178 (0.322)	
- AMENDEMENT*SUBSIDIAIRE	0.000 (0.013)	0.000 (0.011)	
- DOSE*SUBSIDIAIRE	0.541 (0.409)	0.294 (0.249)	
- AMENDEM*DOSE*SUBSID	0.285 (0.243)	0.154 (0.142)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: SBE
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	53.910	53.270	50.860	50.440	47.540	48.230	40.110	45.320	46.950	46.640	44.910	45.120
X 12k	51.540	52.710	50.710	50.490	49.430	54.720	45.840	45.940	39.990	44.490	44.580	46.810
X 13k	50.020	49.520	45.850	50.240	37.210	37.660	50.150	48.310	44.810	40.300	38.500	34.560
X 21k	49.510	50.210	50.600	50.830	49.790	49.760	40.270	42.470	47.650	49.460	39.500	36.210
X 22k	49.780	49.210	49.340	50.990	49.080	46.180	49.070	49.000	45.000	46.340	42.350	45.990
X 23k	52.760	55.790	49.400	48.860	50.860	51.280	46.750	43.930	46.240	49.930	44.130	42.360

2 - MOYENNES ET ECARTS RELATIFS

X ... = 47.063

X 1.. = 46.602 (-0.98) X 2..= 47.524 (0.98)

X .1. = 47.065 (0.00) (.2. = 47.899 (1.78) X .3. = 46.226 (-1.78)

X ..1 = 46.805 (-0.55) X ..2 = 47.321 (0.55)

X 11. = 47.775 (1.51) X 12. = 48.103 (2.21) X 13. = 43.927 (-6.66)
X 21. = 46.355 (-1.50) X 22. = 47.694 (1.34) X 23. = 48.524 (3.10)

X 1.1 = 46.273 (-1.68) X 1.2 = 46.931 (-0.28) X 2.1 = 47.338 (0.58) X 2.2 = 47.711 (1.38)

X .11 = 46.800 (-0.56) X .12 = 47.330 (0.57)
X .21 = 47.226 (0.35) X .22 = 48.572 (3.21)
X .31 = 46.390 (-1.43) X .32 = 46.062 (-2.13)

X 111 = 47.380 (0.67) X 121 = 47.015 (-0.10) X 131 = 44.423 (-5.61)
X 112 = 48.170 (2.35) X 122 = 49.192 (4.52) X 132 = 43.432 (-7.72)
X 211 = 46.220 (-1.79) X 221 = 47.437 (0.79) X 231 = 48.357 (2.75)
X 212 = 46.490 (-1.22) X 222 = 47.952 (1.89) X 232 = 48.692 (3.46)

X 11 = 51.519 (9.47) X 12 = 49.884 (5.99) X 13 = 47.645 (1.24)
X 14 = 45.597 (-3.12) X 15 = 45.649 (-3.00) X 16 = 42.085 (-10.58)

X m1 = 47.020 (-0.09) X m2 = 47.083 (0.04) X m3 = 47.132 (0.15)
X m4 = 48.057 (2.11) X m5 = 45.341 (-3.66) X m6 = 47.747 (1.45)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.96614E+01 (9.4)	4.49368E+01 (14.2)	2.19202E+01 (9.9)
VR2 (cv2%)	8.76856E-01 (2.0)	2.47112E+00 (3.3)	
VR3 (cv3%)	3.45327E+00 (3.9)	3.13442E+00 (3.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.25820E+01	3.83415E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.779 (0.390)	0.341 (0.429)	0.699 (0.418)
- DOSE	0.854 (0.441)	0.374 (0.303)	0.766 (0.479)
- AMENDEMENT*DOSE	3.168 (0.942)	1.386 (0.732)	2.841 (0.919)
- SUBSIDIAIRE	5.462 (0.934)	1.938 (0.778)	
- AMENDEMENT*SUBSIDIAIRE	0.106 (0.254)	0.117 (0.265)	
- DOSE*SUBSIDIAIRE	1.218 (0.687)	1.342 (0.721)	
- AMENDEM*DOSE*SUBSID	0.988 (0.388)	1.088 (0.647)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.583 (0.788)	0.774 (0.387)	
- DOSE	1.735 (0.815)	0.849 (0.437)	
- AMENDEMENT*DOSE	6.435 (0.996)	3.147 (0.950)	
- SUBSIDIAIRE	0.495 (0.492)	0.242 (0.369)	
- AMENDEMENT*SUBSIDIAIRE	0.038 (0.159)	0.018 (0.112)	
- DOSE*SUBSIDIAIRE	0.434 (0.344)	0.212 (0.189)	
- AMENDEM*DOSE*SUBSID	0.352 (0.290)	0.172 (0.157)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: T0-20
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	54.200	55.700	55.300	54.000	73.500	52.800	46.100	50.800	50.000	49.700	54.200	54.200
X 12k	55.700	54.700	52.900	52.100	53.600	52.500	52.500	52.200	47.500	46.600	54.000	51.000
X 13k	54.600	53.400	54.100	54.500	51.200	54.200	53.500	52.200	50.200	47.200	49.200	44.400
X 21k	55.000	53.900	54.300	55.000	54.000	53.800	46.200	47.300	50.100	51.900	44.900	45.700
X 22k	53.900	55.700	54.500	53.900	52.700	50.400	51.600	50.300	48.300	48.500	52.900	54.600
X 23k	57.300	56.000	54.100	52.500	56.000	52.300	53.200	51.400	54.400	54.200	52.800	55.700

2 - MOYENNES ET ECARTS RELATIFS

X ... = 52.560

X 1.. = 52.625 (0.12) X 2..= 52.494 (-0.12)

X .1. = 52.608 (0.09) X .2. = 52.192 (-0.70) X .3. = 52.879 (0.61)

X ..1 = 53.014 (0.86) X ..2 = 52.106 (-0.86)

X 11. = 54.208 (3.14) X 12. = 52.108 (-0.86) X 13. = 51.558 (-1.91)
X 21. = 51.008 (-2.95) X 22. = 52.275 (-0.54) X 23. = 54.200 (3.12)

X 1.1 = 53.461 (1.71) X 1.2 = 51.789 (-1.47) X 2.1 = 52.567 (0.01) X 2.2 = 52.422 (-0.26)

X .11 = 53.150 (1.12) X .12 = 52.067 (-0.94)
X .21 = 52.508 (-0.10) X .22 = 51.875 (-1.30)
X .31 = 53.383 (1.57) X .32 = 52.375 (-0.35)

X 111 = 55.550 (5.69) X 121 = 52.700 (0.27) X 131 = 52.133 (-0.81)
X 112 = 52.867 (0.58) X 122 = 51.517 (-1.98) X 132 = 50.983 (-3.00)
X 211 = 50.750 (-3.44) X 221 = 52.317 (-0.46) X 231 = 54.633 (3.95)
X 212 = 51.267 (-2.46) X 222 = 52.233 (-0.62) X 232 = 53.767 (2.30)

X 11 = 55.008 (4.66) X 12 = 53.933 (2.61) X 13 = 54.792 (4.25)
X 14 = 50.608 (-3.71) X 15 = 49.883 (-5.09) X 16 = 51.133 (-2.71)

X m1 = 51.617 (-1.79) X m2 = 51.667 (-1.70) X m3 = 54.625 (3.93)
X m4 = 52.417 (-0.27) X m5 = 52.283 (-0.53) X m6 = 52.750 (0.36)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.48407E+01 (7.3)	2.43372E+01 (9.4)	1.48997E+01 (7.3)
VR2 (cv2%)	7.44492E+00 (5.2)	1.29119E+01 (6.8)	
VR3 (cv3%)	8.36145E+00 (5.5)	7.26805E+00 (3.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.09120E+00	7.67224E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.021 (0.118)	0.013 (0.092)	0.021 (0.118)
- DOSE	0.194 (0.174)	0.118 (0.111)	0.193 (0.173)
- AMENDEMENT*DOSE	3.476 (0.955)	2.120 (0.861)	3.462 (0.950)
- SUBSIDIAIRE	1.995 (0.784)	1.150 (0.666)	
- AMENDEMENT*SUBSIDIAIRE	1.256 (0.728)	1.445 (0.761)	
- DOSE*SUBSIDIAIRE	0.042 (0.041)	0.048 (0.047)	
- AMENDEM*DOSE*SUBSID	0.406 (0.324)	0.467 (0.363)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.028 (0.139)	0.021 (0.120)	
- DOSE	0.265 (0.228)	0.196 (0.176)	
- AMENDEMENT*DOSE	4.749 (0.987)	3.519 (0.964)	
- SUBSIDIAIRE	1.367 (0.754)	1.013 (0.680)	
- AMENDEMENT*SUBSIDIAIRE	0.967 (0.331)	0.716 (0.406)	
- DOSE*SUBSIDIAIRE	0.032 (0.031)	0.024 (0.023)	
- AMENDEM*DOSE*SUBSID	0.313 (0.263)	0.232 (0.203)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: S/T0-20
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.995	0.956	0.920	0.934	0.847	0.913	0.870	0.892	0.939	0.938	0.829	0.832
X 12k	0.925	0.964	0.959	0.969	0.922	1.042	0.873	0.880	0.842	0.955	0.826	0.918
X 13k	0.916	0.927	0.848	0.922	0.727	0.695	0.937	0.925	0.893	0.854	0.783	0.778
X 21k	0.900	0.932	0.932	0.924	0.922	0.925	0.872	0.898	0.951	0.953	0.880	0.792
X 22k	0.924	0.883	0.905	0.946	0.931	0.916	0.951	0.974	0.932	0.955	0.801	0.842
X 23k	0.921	0.996	0.913	0.931	0.908	0.971	0.879	0.855	0.850	0.921	0.836	0.761

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.896

X 1.. = 0.887 (-0.99) X 2..= 0.905 (0.99)

X .1. = 0.898 (0.17) X .2. = 0.918 (2.45) X .3. = 0.873 (-2.62)

X ..1 = 0.885 (-1.27) X ..2 = 0.908 (1.27)

X 11. = 0.889 (-0.83) X 12. = 0.923 (2.97) X 13. = 0.850 (-5.11)
X 21. = 0.907 (1.17) X 22. = 0.913 (1.92) X 23. = 0.895 (-0.12)

X 1.1 = 0.869 (-3.00) X 1.2 = 0.905 (1.02) X 2.1 = 0.900 (0.46) X 2.2 = 0.910 (1.51)

X .11 = 0.888 (-0.92) X .12 = 0.908 (1.27)
X .21 = 0.899 (0.33) X .22 = 0.937 (4.56)
X .31 = 0.867 (-3.21) X .32 = 0.878 (-2.03)

X 111 = 0.866 (-3.32) X 121 = 0.891 (-0.57) X 131 = 0.850 (-5.10)
X 112 = 0.911 (1.67) X 122 = 0.955 (6.51) X 132 = 0.850 (-5.12)
X 211 = 0.909 (1.47) X 221 = 0.907 (1.23) X 231 = 0.884 (-1.31)
X 212 = 0.904 (0.87) X 222 = 0.920 (2.61) X 232 = 0.906 (1.06)

X 11 = 0.937 (4.51) X 12 = 0.925 (3.23) X 13 = 0.877 (-2.18)
X 14 = 0.901 (0.48) X 15 = 0.915 (2.12) X 16 = 0.823 (-8.16)

X m1 = 0.909 (1.47) X m2 = 0.908 (1.35) X m3 = 0.869 (-3.04)
X m4 = 0.917 (2.35) X m5 = 0.868 (-3.12) X m6 = 0.905 (0.99)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.92082E-03 (7.8)	7.90631E-03 (9.9)	4.70291E-03 (7.7)
VR2 (cv2%)	1.88955E-03 (4.9)	1.95913E-03 (4.9)	
VR3 (cv3%)	1.94012E-03 (4.9)	1.92640E-03 (4.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	5.15718E+00	1.15560E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.150 (0.706)	0.715 (0.410)	1.195 (0.713)
- DOSE	2.521 (0.901)	1.569 (0.773)	2.621 (0.909)
- AMENDEMENT*DOSE	0.893 (0.425)	0.556 (0.415)	0.929 (0.414)
- SUBSIDIAIRE	4.906 (0.924)	4.735 (0.920)	
- AMENDEMENT*SUBSIDIAIRE	1.637 (0.790)	1.648 (0.791)	
- DOSE*SUBSIDIAIRE	0.601 (0.439)	0.605 (0.442)	
- AMENDEM*DOSE*SUBSID	1.341 (0.721)	1.350 (0.723)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.909 (0.818)	1.309 (0.743)	
- DOSE	3.967 (0.976)	2.871 (0.936)	
- AMENDEMENT*DOSE	1.406 (0.746)	1.017 (0.630)	
- SUBSIDIAIRE	2.965 (0.912)	2.145 (0.854)	
- AMENDEMENT*SUBSIDIAIRE	1.015 (0.680)	0.735 (0.400)	
- DOSE*SUBSIDIAIRE	0.373 (0.304)	0.270 (0.232)	
- AMENDEM*DOSE*SUBSID	0.832 (0.445)	0.602 (0.443)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: CA/MGO-20
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.128	0.123	0.108	0.114	0.111	0.112	0.122	0.126	0.107	0.100	0.091	0.088
X 12k	0.092	0.104	0.111	0.114	0.096	0.104	0.097	0.102	0.119	0.114	0.094	0.095
X 13k	0.108	0.096	0.122	0.105	0.102	0.156	0.115	0.133	0.116	0.134	0.105	0.115
X 21k	0.104	0.108	0.106	0.113	0.113	0.109	0.134	0.120	0.116	0.101	0.099	0.119
X 22k	0.106	0.102	0.104	0.096	0.110	0.104	0.095	0.090	0.121	0.093	0.097	0.097
X 23k	0.104	0.112	0.107	0.106	0.111	0.112	0.097	0.108	0.117	0.103	0.101	0.097

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.108

X 1.. = 0.111 (1.91) X 2..= 0.106 (-1.91)

X .1. = 0.111 (2.67) X .2. = 0.102 (-5.58) X .3. = 0.112 (2.91)

X ..1 = 0.108 (-0.48) X ..2 = 0.109 (0.48)

X 11. = 0.111 (2.25) X 12. = 0.104 (-4.47) X 13. = 0.117 (7.95)
X 21. = 0.112 (3.10) X 22. = 0.101 (-6.69) X 23. = 0.106 (-2.14)

X 1.1 = 0.108 (-0.40) X 1.2 = 0.113 (4.21) X 2.1 = 0.108 (-0.56) X 2.2 = 0.105 (-3.26)

X .11 = 0.112 (2.89) X .12 = 0.111 (2.46)
X .21 = 0.104 (-4.51) X .22 = 0.101 (-6.65)
X .31 = 0.109 (0.18) X .32 = 0.115 (5.63)

X 111 = 0.111 (2.56) X 121 = 0.102 (-6.23) X 131 = 0.111 (2.47)
X 112 = 0.111 (1.93) X 122 = 0.106 (-2.71) X 132 = 0.123 (13.42)
X 211 = 0.112 (3.22) X 221 = 0.105 (-2.79) X 231 = 0.106 (-2.11)
X 212 = 0.112 (2.98) X 222 = 0.097 (-10.59) X 232 = 0.106 (-2.16)

X 11 = 0.107 (-1.25) X 12 = 0.109 (0.35) X 13 = 0.112 (3.02)
X 14 = 0.112 (2.88) X 15 = 0.112 (2.95) X 16 = 0.100 (-7.95)

X m1 = 0.111 (2.25) X m2 = 0.108 (-0.31) X m3 = 0.107 (-1.04)
X m4 = 0.107 (-1.53) X m5 = 0.113 (4.03) X m6 = 0.105 (-3.41)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.38836E-04 (10.9)	1.69647E-04 (12.0)	1.47778E-04 (11.2)
VR2 (cv2%)	1.05643E-04 (9.5)	9.99670E-05 (9.2)	
VR3 (cv3%)	8.43453E-05 (8.5)	8.54804E-05 (8.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.33288E+00	2.59942E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.222 (0.855)	1.818 (0.813)	2.087 (0.839)
- DOSE	4.753 (0.983)	3.890 (0.967)	4.465 (0.979)
- AMENDEMENT*DOSE	1.619 (0.783)	1.325 (0.717)	1.321 (0.758)
- SUBSIDIAIRE	0.184 (0.314)	0.195 (0.322)	
- AMENDEMENT*SUBSIDIAIRE	3.357 (0.924)	3.312 (0.923)	
- DOSE*SUBSIDIAIRE	1.329 (0.718)	1.312 (0.713)	
- AMENDEM*DOSE*SUBSID	0.931 (0.410)	0.919 (0.415)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.849 (0.906)	2.558 (0.888)	
- DOSE	6.095 (0.995)	5.472 (0.993)	
- AMENDEMENT*DOSE	2.077 (0.866)	1.864 (0.836)	
- SUBSIDIAIRE	0.180 (0.323)	0.161 (0.308)	
- AMENDEMENT*SUBSIDIAIRE	2.615 (0.892)	2.348 (0.872)	
- DOSE*SUBSIDIAIRE	1.036 (0.636)	0.930 (0.404)	
- AMENDEM*DOSE*SUBSID	0.725 (0.493)	0.651 (0.470)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	182.759	208.400	192.692	160.323	187.600	175.926	146.296	171.923	221.429	210.000	164.444	153.448
X 12k	188.148	226.087	217.826	138.056	244.500	257.619	132.941	102.727	197.000	294.000	183.750	184.800
X 13k	190.000	195.600	161.429	198.000	152.500	154.583	198.400	183.462	233.684	190.000	92.195	113.333
X 21k	168.276	154.375	191.923	172.759	213.913	188.462	159.200	168.000	236.000	203.750	150.000	118.667
X 22k	140.571	157.097	211.739	162.258	193.600	162.500	194.000	186.154	193.478	183.200	144.138	119.211
X 23k	148.571	109.600	212.174	253.684	200.800	187.407	184.800	97.955	190.417	274.444	140.323	130.625

2 - MOYENNES ET ECARTS RELATIFS

X ... = 179.305

X 1.. = 183.497 (2.34) X 2..= 175.113 (-2.34)

X .1. = 179.190 (-0.06) X .2. = 183.975 (2.60) X .3. = 174.749 (-2.54)

X ..1 = 182.264 (1.65) X ..2 = 176.345 (-1.65)

X 11. = 181.270 (1.10) X 12. = 197.288 (10.03) X 13. = 171.932 (-4.11)
X 21. = 177.110 (-1.22) X 22. = 170.662 (-4.82) X 23. = 177.567 (-0.97)

X 1.1 = 182.644 (1.86) X 1.2 = 184.349 (2.81) X 2.1 = 181.885 (1.44) X 2.2 = 168.341 (-6.11)

X .11 = 184.544 (2.92) X .12 = 173.836 (-3.05)
X .21 = 186.808 (4.18) X .22 = 181.142 (1.02)
X .31 = 175.441 (-2.15) X .32 = 174.058 (-2.93)

X 111 = 182.537 (1.80) X 121 = 194.028 (8.21) X 131 = 171.368 (-4.43)
X 112 = 180.003 (0.39) X 122 = 200.548 (11.85) X 132 = 172.496 (-3.80)
X 211 = 186.552 (4.04) X 221 = 179.588 (0.16) X 231 = 179.514 (0.12)
X 212 = 167.669 (-6.49) X 222 = 161.737 (-9.80) X 232 = 175.619 (-2.06)

X 11 = 172.457 (-3.82) X 12 = 189.405 (5.63) X 13 = 193.284 (7.80)
X 14 = 160.488 (-10.49) X 15 = 218.950 (22.11) X 16 = 141.244 (-21.23)

X a1 = 168.317 (-6.13) X a2 = 174.187 (-2.85) X a3 = 176.019 (-1.83)
X a4 = 193.871 (8.12) X a5 = 165.796 (-7.53) X a6 = 197.639 (10.23)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.54539E+03 (21.9)	2.90390E+03 (30.1)	1.39863E+03 (20.9)
VR2 (cv2%)	4.92254E+02 (12.4)	4.09922E+02 (11.3)	
VR3 (cv3%)	8.30713E+02 (16.1)	8.47180E+02 (16.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.30116E+00	1.10951E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.819 (0.378)	0.436 (0.478)	0.905 (0.355)
- DOSE	0.331 (0.274)	0.176 (0.159)	0.365 (0.298)
- AMENDEMENT*DOSE	1.062 (0.638)	0.565 (0.420)	1.174 (0.670)
- SUBSIDIAIRE	1.281 (0.690)	1.538 (0.730)	
- AMENDEMENT*SUBSIDIAIRE	1.260 (0.728)	1.235 (0.723)	
- DOSE*SUBSIDIAIRE	0.157 (0.144)	0.154 (0.142)	
- AMENDEM*DOSE*SUBSID	0.171 (0.155)	0.167 (0.152)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.168 (0.715)	0.778 (0.386)	
- DOSE	0.472 (0.368)	0.314 (0.264)	
- AMENDEMENT*DOSE	1.516 (0.772)	1.009 (0.627)	
- SUBSIDIAIRE	0.582 (0.455)	0.388 (0.457)	
- AMENDEMENT*SUBSIDIAIRE	0.966 (0.332)	0.643 (0.432)	
- DOSE*SUBSIDIAIRE	0.121 (0.114)	0.080 (0.078)	
- AMENDEM*DOSE*SUBSID	0.131 (0.122)	0.087 (0.084)	

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ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 01/03/84
parametre: PH-H2O
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.800	5.900	5.700	5.800	5.900	5.600	5.700	5.700	5.800	5.600	5.800	5.700
X 12k	5.900	5.800	5.800	5.800	5.900	5.800	5.900	5.600	5.600	6.100	5.900	5.800
X 13k	5.800	5.900	5.800	5.700	5.700	5.800	5.900	5.800	5.700	5.800	5.700	5.600
X 21k	5.800	5.800	5.700	5.900	6.000	5.700	5.800	5.800	5.900	6.000	6.200	5.800
X 22k	5.700	5.900	5.900	5.800	5.900	5.800	5.900	5.900	6.000	6.000	5.700	5.900
X 23k	5.700	6.000	5.800	5.700	5.800	5.600	6.000	5.700	5.800	5.600	5.900	5.900

2 - MOYENNES ET ECARTS RELATIFS

X ... = 5.811

X 1.. = 5.781 (-0.53) X 2..= 5.842 (0.53)

X .1. = 5.808 (-0.05) X .2. = 5.846 (0.60) X .3. = 5.779 (-0.55)

X ..1 = 5.828 (0.29) X ..2 = 5.794 (-0.29)

X 11. = 5.750 (-1.05) X 12. = 5.825 (0.24) X 13. = 5.767 (-0.76)
X 21. = 5.867 (0.96) X 22. = 5.867 (0.96) X 23. = 5.792 (-0.33)

X 1.1 = 5.794 (-0.29) X 1.2 = 5.767 (-0.76) X 2.1 = 5.861 (0.86) X 2.2 = 5.822 (0.19)

X .11 = 5.842 (0.53) X .12 = 5.775 (-0.62)
X .21 = 5.842 (0.53) X .22 = 5.850 (0.67)
X .31 = 5.800 (-0.19) X .32 = 5.758 (-0.91)

X 111 = 5.783 (-0.48) X 121 = 5.833 (0.38) X 131 = 5.767 (-0.76)
X 112 = 5.717 (-1.63) X 122 = 5.817 (0.10) X 132 = 5.767 (-0.76)
X 211 = 5.900 (1.53) X 221 = 5.850 (0.67) X 231 = 5.833 (0.38)
X 212 = 5.833 (0.38) X 222 = 5.883 (1.24) X 232 = 5.750 (-1.05)

X 11 = 5.833 (0.38) X 12 = 5.783 (-0.48) X 13 = 5.792 (-0.33)
X 14 = 5.808 (-0.05) X 15 = 5.825 (0.24) X 16 = 5.825 (0.24)

X m1 = 5.842 (0.53) X m2 = 5.808 (-0.05) X m3 = 5.800 (-0.19)
X m4 = 5.800 (-0.19) X m5 = 5.817 (0.10) X m6 = 5.800 (-0.19)

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.14889E-02 (1.8)	1.18222E-02 (1.9)	1.35556E-02 (2.0)
VR2 (cv2%)	2.93333E-02 (2.9)	2.56667E-02 (2.8)	
VR3 (cv3%)	1.72667E-02 (2.3)	1.80000E-02 (2.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.09871E+00	1.58827E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	5.851 (0.978)	5.686 (0.976)	4.959 (0.964)
- DOSE	2.333 (0.884)	2.267 (0.877)	1.977 (0.842)
- AMENDEMENT*DOSE	1.245 (0.695)	1.210 (0.685)	1.055 (0.632)
- SUBSIDIAIRE	0.682 (0.451)	0.779 (0.421)	
- AMENDEMENT*SUBSIDIAIRE	0.032 (0.147)	0.031 (0.144)	
- DOSE*SUBSIDIAIRE	0.507 (0.386)	0.486 (0.374)	
- AMENDEM*DOSE*SUBSID	0.394 (0.317)	0.378 (0.306)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.159 (0.956)	4.125 (0.955)	
- DOSE	1.659 (0.801)	1.645 (0.798)	
- AMENDEMENT*DOSE	0.885 (0.422)	0.878 (0.425)	
- SUBSIDIAIRE	1.237 (0.729)	1.227 (0.727)	
- AMENDEMENT*SUBSIDIAIRE	0.034 (0.152)	0.034 (0.152)	
- DOSE*SUBSIDIAIRE	0.541 (0.409)	0.537 (0.407)	
- AMENDEM*DOSE*SUBSID	0.421 (0.336)	0.418 (0.333)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	4.900	4.800	4.600	4.700	4.800	4.700	4.800	4.800	4.800	4.700	4.800	4.700
X 12k	4.800	4.700	4.800	4.700	4.800	4.800	4.900	4.800	4.800	5.000	4.900	4.900
X 13k	4.700	4.700	4.600	4.700	4.800	4.800	4.800	4.700	4.700	4.800	4.700	4.800
X 21k	4.700	4.700	4.800	4.700	4.900	4.700	4.800	4.800	4.800	4.800	5.200	4.900
X 22k	4.700	4.700	4.800	4.700	4.800	4.800	4.900	4.900	5.000	5.000	4.700	4.700
X 23k	4.700	4.900	4.800	4.700	4.800	4.700	5.000	4.700	4.700	4.700	4.900	4.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 4.787

X 1.. = 4.772 (-0.32) X 2..= 4.803 (0.32)

X .1. = 4.788 (0.00) X .2. = 4.817 (0.61) X .3. = 4.758 (-0.61)

X ..1 = 4.806 (0.38) X ..2 = 4.769 (-0.38)

X 11. = 4.758 (-0.61) X 12. = 4.825 (0.78) X 13. = 4.733 (-1.13)
X 21. = 4.817 (0.61) X 22. = 4.808 (0.44) X 23. = 4.783 (-0.09)

X 1.1 = 4.778 (-0.20) X 1.2 = 4.767 (-0.44) X 2.1 = 4.833 (0.96) X 2.2 = 4.772 (-0.32)

X .11 = 4.825 (0.78) X .12 = 4.750 (-0.78)
X .21 = 4.825 (0.78) X .22 = 4.808 (0.44)
X .31 = 4.767 (-0.44) X .32 = 4.750 (-0.78)

X 111 = 4.783 (-0.09) X 121 = 4.833 (0.96) X 131 = 4.717 (-1.48)
X 112 = 4.733 (-1.13) X 122 = 4.817 (0.61) X 132 = 4.750 (-0.78)
X 211 = 4.867 (1.65) X 221 = 4.817 (0.61) X 231 = 4.817 (0.61)
X 212 = 4.767 (-0.44) X 222 = 4.800 (0.26) X 232 = 4.750 (-0.78)

X 11 = 4.750 (-0.78) X 12 = 4.717 (-1.48) X 13 = 4.783 (-0.09)
X 14 = 4.825 (0.78) X 15 = 4.817 (0.61) X 16 = 4.833 (0.96)

X a1 = 4.858 (1.48) X a2 = 4.800 (0.26) X a3 = 4.758 (-0.61)
X a4 = 4.775 (-0.26) X a5 = 4.783 (-0.09) X a6 = 4.750 (-0.78)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.26500E-02 (2.3)	1.41833E-02 (2.5)	1.12500E-02 (2.2)
VR2 (cv2%)	6.13889E-03 (1.6)	9.13889E-03 (2.0)	
VR3 (cv3%)	5.93889E-03 (1.6)	5.33889E-03 (1.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.32536E+00	5.06002E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.329 (0.741)	1.185 (0.713)	1.494 (0.766)
- DOSE	1.614 (0.782)	1.439 (0.745)	1.815 (0.818)
- AMENDEMENT*DOSE	0.801 (0.463)	0.715 (0.497)	0.901 (0.425)
- SUBSIDIAIRE	3.824 (0.893)	2.568 (0.831)	
- AMENDEMENT*SUBSIDIAIRE	1.894 (0.822)	2.107 (0.844)	
- DOSE*SUBSIDIAIRE	1.146 (0.665)	1.275 (0.703)	
- AMENDEM*DOSE*SUBSID	0.631 (0.455)	0.702 (0.491)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.944 (0.834)	1.816 (0.819)	
- DOSE	2.362 (0.897)	2.206 (0.881)	
- AMENDEMENT*DOSE	1.173 (0.682)	1.095 (0.657)	
- SUBSIDIAIRE	2.716 (0.898)	2.536 (0.886)	
- AMENDEMENT*SUBSIDIAIRE	1.302 (0.742)	1.215 (0.725)	
- DOSE*SUBSIDIAIRE	0.787 (0.464)	0.735 (0.489)	
- AMENDEM*DOSE*SUBSID	0.434 (0.344)	0.405 (0.325)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: KTA
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.410	1.230	1.050	0.900	0.920	0.950	1.290	1.050	0.840	0.870	0.790	0.840
X 12k	0.900	1.020	0.870	1.020	0.840	0.950	1.020	1.150	1.240	1.190	0.970	0.920
X 13k	0.900	0.920	1.050	1.020	0.900	0.870	0.840	0.740	0.900	0.820	0.950	0.920
X 21k	1.000	1.100	0.790	0.840	0.840	0.950	1.050	1.130	0.740	0.840	1.100	1.020
X 22k	0.900	0.900	0.840	1.000	0.920	0.950	0.900	0.900	1.150	1.050	1.090	1.260
X 23k	1.020	1.290	0.820	0.820	1.000	1.070	0.790	1.250	0.770	0.840	0.820	0.920

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.968

X 1.. = 0.974 (0.57) X 2..= 0.963 (-0.57)

X .1. = 0.981 (1.29) X .2. = 0.996 (3.06) X .3. = 0.926 (-4.35)

X ..1 = 0.951 (-1.84) X ..2 = 0.986 (1.84)

X 11. = 1.012 (4.48) X 12. = 1.007 (4.04) X 13. = 0.902 (-6.80)
X 21. = 0.950 (-1.89) X 22. = 0.988 (2.07) X 23. = 0.950 (-1.89)

X 1.1 = 0.982 (1.43) X 1.2 = 0.966 (-0.29) X 2.1 = 0.919 (-5.11) X 2.2 = 1.007 (3.96)

X .11 = 0.985 (1.72) X .12 = 0.977 (0.86)
X .21 = 0.970 (0.17) X .22 = 1.026 (5.94)
X .31 = 0.897 (-7.40) X .32 = 0.956 (-1.29)

X 111 = 1.050 (8.43) X 121 = 0.973 (0.52) X 131 = 0.923 (-4.65)
X 112 = 0.973 (0.52) X 122 = 1.042 (7.57) X 132 = 0.882 (-8.95)
X 211 = 0.920 (-4.99) X 221 = 0.967 (-0.17) X 231 = 0.870 (-10.15)
X 212 = 0.980 (1.20) X 222 = 1.010 (4.30) X 232 = 1.030 (6.37)

X L1 = 1.048 (8.26) X L2 = 0.918 (-5.16) X L3 = 0.930 (-3.96)
X L4 = 1.009 (4.22) X L5 = 0.938 (-3.18) X L6 = 0.967 (-0.17)

X M1 = 1.106 (14.20) X M2 = 1.012 (4.48) X M3 = 0.961 (-0.77)
X M4 = 0.899 (-7.14) X M5 = 0.927 (-4.30) X M6 = 0.906 (-6.45)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.78640E-02 (20.1)	2.90913E-02 (17.6)	2.85700E-02 (17.5)
VR2 (cv2%)	1.65889E-03 (4.2)	9.86222E-03 (10.3)	
VR3 (cv3%)	6.84489E-03 (8.5)	5.20422E-03 (7.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.22187E+01	1.53659E+01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.059 (0.195)	0.076 (0.219)	0.078 (0.221)
- DOSE	0.888 (0.427)	1.156 (0.668)	1.177 (0.675)
- AMENDEMENT*DOSE	0.480 (0.370)	0.625 (0.452)	0.636 (0.456)
- SUBSIDIAIRE	13.717 (0.986)	2.307 (0.812)	
- AMENDEMENT*SUBSIDIAIRE	7.172 (0.988)	9.433 (0.995)	
- DOSE*SUBSIDIAIRE	1.269 (0.701)	1.669 (0.793)	
- AMENDEM*DOSE*SUBSID	2.985 (0.933)	3.927 (0.968)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.119 (0.268)	0.146 (0.294)	
- DOSE	1.795 (0.825)	2.209 (0.882)	
- AMENDEMENT*DOSE	0.970 (0.388)	1.193 (0.688)	
- SUBSIDIAIRE	1.215 (0.725)	1.495 (0.775)	
- AMENDEMENT*SUBSIDIAIRE	2.620 (0.892)	3.224 (0.925)	
- DOSE*SUBSIDIAIRE	0.464 (0.363)	0.570 (0.426)	
- AMENDEM*DOSE*SUBSID	1.091 (0.655)	1.342 (0.730)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: NAT1A
unite : meq/100g

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.830	0.870	0.780	0.300	0.520	0.430	0.300	0.370	0.520	0.610	0.650	0.520
X 12k	0.430	0.400	0.370	0.350	0.520	0.300	0.430	0.390	0.440	0.440	0.650	0.520
X 13k	0.350	0.530	0.390	0.430	0.430	0.260	0.300	0.170	0.520	0.480	0.570	0.430
X 21k	0.570	0.350	0.350	0.300	0.350	0.530	0.350	0.520	0.570	0.650	0.610	0.570
X 22k	0.350	0.500	0.370	0.350	0.570	0.350	0.350	0.520	0.610	0.650	0.450	0.420
X 23k	0.610	0.650	0.430	0.370	0.480	0.430	0.480	0.390	0.610	0.520	0.570	0.610

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.474

X 1.. = 0.467 (-1.64) X 2..= 0.482 (1.64)

X .1. = 0.518 (9.07) X .2. = 0.447 (-5.77) X .3. = 0.459 (-3.31)

X ..1 = 0.491 (3.51) X ..2 = 0.458 (-3.51)

X 11. = 0.558 (17.68) X 12. = 0.437 (-7.96) X 13. = 0.405 (-14.64)
X 21. = 0.477 (0.47) X 22. = 0.458 (-3.57) X 23. = 0.513 (8.02)

X 1.1 = 0.500 (5.39) X 1.2 = 0.433 (-8.67) X 2.1 = 0.482 (1.64) X 2.2 = 0.482 (1.64)

X .11 = 0.533 (12.41) X .12 = 0.502 (5.74)
X .21 = 0.462 (-2.69) X .22 = 0.433 (-8.84)
X .31 = 0.478 (0.82) X .32 = 0.439 (-7.44)

X 111 = 0.600 (26.46) X 121 = 0.473 (-0.23) X 131 = 0.427 (-10.07)
X 112 = 0.517 (8.90) X 122 = 0.400 (-15.69) X 132 = 0.383 (-19.20)
X 211 = 0.467 (-1.64) X 221 = 0.450 (-5.15) X 231 = 0.530 (11.71)
X 212 = 0.487 (2.58) X 222 = 0.465 (-1.99) X 232 = 0.495 (4.33)

X L1 = 0.537 (13.11) X L2 = 0.399 (-15.87) X L3 = 0.431 (-9.19)
X L4 = 0.381 (-19.73) X L5 = 0.552 (16.28) X L6 = 0.548 (15.40)

X M1 = 0.558 (17.51) X M2 = 0.498 (4.86) X M3 = 0.431 (-9.19)
X M4 = 0.451 (-4.98) X M5 = 0.444 (-6.38) X M6 = 0.466 (-1.81)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.42722E-02 (25.2)	2.41716E-02 (32.8)	1.13122E-02 (22.4)
VR2 (cv2%)	1.12067E-02 (22.3)	6.75667E-03 (17.3)	
VR3 (cv3%)	9.58467E-03 (20.6)	1.04747E-02 (21.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.53160E-01	5.09516E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.305 (0.408)	0.190 (0.322)	0.385 (0.452)
- DOSE	2.395 (0.890)	1.414 (0.739)	3.022 (0.935)
- AMENDEMENT*DOSE	3.770 (0.964)	2.226 (0.873)	4.756 (0.980)
- SUBSIDIAIRE	1.785 (0.762)	2.960 (0.855)	
- AMENDEMENT*SUBSIDIAIRE	2.087 (0.842)	1.909 (0.824)	
- DOSE*SUBSIDIAIRE	0.017 (0.016)	0.016 (0.015)	
- AMENDEM*DOSE*SUBSID	0.408 (0.326)	0.374 (0.303)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.375 (0.450)	0.280 (0.394)	
- DOSE	2.941 (0.940)	2.194 (0.880)	
- AMENDEMENT*DOSE	4.629 (0.986)	3.453 (0.962)	
- SUBSIDIAIRE	1.721 (0.807)	1.284 (0.738)	
- AMENDEMENT*SUBSIDIAIRE	1.721 (0.807)	1.284 (0.738)	
- DOSE*SUBSIDIAIRE	0.014 (0.013)	0.010 (0.010)	
- AMENDEM*DOSE*SUBSID	0.337 (0.279)	0.251 (0.218)	

E

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: CAT1A
unite : meq/100g

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	8.280	8.280	6.890	6.840	7.680	6.890	6.640	7.440	5.690	5.640	5.690	5.590
X 12k	6.740	6.790	7.390	7.290	7.190	7.390	6.090	6.590	6.940	6.990	6.090	6.290
X 13k	7.630	6.990	7.240	6.490	7.240	6.590	6.290	6.640	6.590	6.390	5.490	5.390
X 21k	6.690	6.990	6.640	6.940	6.640	6.890	5.990	6.590	6.490	6.290	7.190	5.800
X 22k	8.380	7.930	7.440	7.240	7.580	6.500	6.190	6.040	8.680	7.290	5.890	5.940
X 23k	7.290	7.400	6.890	6.940	6.840	6.990	5.940	6.140	5.990	5.640	5.840	5.790

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.725

X 1.. = 6.731 (0.08) X 2..= 6.720 (-0.08)

X .1. = 6.695 (-0.45) X .2. = 6.953 (3.39) X .3. = 6.527 (-2.94)

X ..1 = 6.788 (0.94) X ..2 = 6.663 (-0.94)

X 11. = 6.796 (1.05) X 12. = 6.815 (1.33) X 13. = 6.581 (-2.15)
X 21. = 6.595 (-1.94) X 22. = 7.092 (5.45) X 23. = 6.474 (-3.74)

X 1.1 = 6.766 (0.61) X 1.2 = 6.695 (-0.45) X 2.1 = 6.811 (1.27) X 2.2 = 6.630 (-1.42)

X .11 = 6.709 (-0.24) X .12 = 6.682 (-0.65)
X .21 = 7.050 (4.83) X .22 = 6.857 (1.95)
X .31 = 6.606 (-1.78) X .32 = 6.449 (-4.11)

X 111 = 6.812 (1.28) X 121 = 6.740 (0.22) X 131 = 6.747 (0.32)
X 112 = 6.780 (0.81) X 122 = 6.890 (2.45) X 132 = 6.415 (-4.62)
X 211 = 6.607 (-1.77) X 221 = 7.360 (9.44) X 231 = 6.465 (-3.87)
X 212 = 6.583 (-2.11) X 222 = 6.823 (1.46) X 232 = 6.483 (-3.60)

X L1 = 7.449 (10.76) X L2 = 7.019 (4.37) X L3 = 7.035 (4.60)
X L4 = 6.382 (-5.11) X L5 = 6.552 (-2.58) X L6 = 5.916 (-12.04)

X M1 = 7.147 (6.26) X M2 = 6.582 (-2.13) X M3 = 6.547 (-2.65)
X M4 = 6.519 (-3.07) X M5 = 6.942 (3.23) X M6 = 6.614 (-1.65)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.84848E-01 (10.4)	1.05036E+00 (15.2)	4.07117E-01 (9.5)
VR2 (cv2%)	2.17122E-01 (6.9)	9.58992E-02 (4.6)	
VR3 (cv3%)	9.25658E-02 (4.5)	1.16810E-01 (5.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.39978E+01	2.73320E+01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.004 (0.051)	0.002 (0.035)	0.005 (0.055)
- DOSE	2.277 (0.878)	1.051 (0.634)	2.712 (0.916)
- AMENDEMENT*DOSE	0.792 (0.468)	0.365 (0.298)	0.943 (0.409)
- SUBSIDIAIRE	1.313 (0.696)	2.972 (0.956)	
- AMENDEMENT*SUBSIDIAIRE	0.582 (0.459)	0.461 (0.490)	
- DOSE*SUBSIDIAIRE	0.492 (0.378)	0.390 (0.314)	
- AMENDEM*DOSE*SUBSID	4.522 (0.979)	3.584 (0.958)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.007 (0.070)	0.004 (0.051)	
- DOSE	4.216 (0.980)	2.262 (0.887)	
- AMENDEMENT*DOSE	1.465 (0.761)	0.786 (0.465)	
- SUBSIDIAIRE	1.088 (0.698)	0.584 (0.455)	
- AMENDEMENT*SUBSIDIAIRE	0.206 (0.343)	0.110 (0.260)	
- DOSE*SUBSIDIAIRE	0.174 (0.158)	0.093 (0.089)	
- AMENDEM*DOSE*SUBSID	1.598 (0.789)	0.858 (0.433)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: MGT1A
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	116.600	123.200	117.400	108.400	123.200	116.600	108.000	98.200	87.700	91.900	95.900	95.100
X 12k	132.200	119.100	127.300	114.800	119.900	113.300	106.700	104.300	106.400	117.900	93.400	83.600
X 13k	124.000	116.600	118.300	113.300	117.400	119.900	99.300	93.600	85.200	81.900	73.700	77.000
X 21k	108.400	118.300	124.800	118.300	119.900	116.600	90.300	91.800	108.200	100.000	169.100	88.500
X 22k	116.600	118.300	127.300	113.100	128.900	118.300	100.200	100.200	111.500	118.100	108.000	122.800
X 23k	123.200	128.400	119.900	116.600	126.500	119.900	110.000	99.300	93.400	98.400	98.400	93.400

2 - MOYENNES ET ECARTS RELATIFS

X ... = 109.808

X 1.. = 106.703 (-2.83) X 2..= 112.914 (2.83)

X .1. = 109.850 (0.04) X .2. = 113.425 (3.29) X .3. = 106.150 (-3.33)

X ..1 = 112.144 (2.13) X ..2 = 107.472 (-2.13)

X 11. = 106.850 (-2.69) X 12. = 111.575 (1.61) X 13. = 101.683 (-7.40)
X 21. = 112.850 (2.77) X 22. = 115.275 (4.98) X 23. = 110.617 (0.74)

X 1.1 = 108.478 (-1.21) X 1.2 = 104.928 (-4.44) X 2.1 = 115.811 (5.47) X 2.2 = 110.017 (0.19)

X .11 = 114.125 (3.93) X .12 = 105.575 (-3.86)
X .21 = 114.867 (4.61) X .22 = 111.983 (1.98)
X .31 = 107.442 (-2.16) X .32 = 104.858 (-4.51)

X 111 = 108.133 (-1.53) X 121 = 114.317 (4.11) X 131 = 102.983 (-6.22)
X 112 = 105.567 (-3.86) X 122 = 108.833 (-0.89) X 132 = 100.383 (-8.58)
X 211 = 120.117 (9.39) X 221 = 115.417 (5.11) X 231 = 111.900 (1.90)
X 212 = 105.583 (-3.85) X 222 = 115.133 (4.85) X 232 = 109.333 (-0.43)

X L1 = 120.408 (9.65) X L2 = 118.292 (7.73) X L3 = 120.033 (9.31)
X L4 = 100.158 (-8.79) X L5 = 100.050 (-8.89) X L6 = 99.908 (-9.02)

X M1 = 118.000 (7.46) X M2 = 107.442 (-2.16) X M3 = 111.783 (1.80)
X M4 = 104.992 (-4.39) X M5 = 110.042 (0.21) X M6 = 106.592 (-2.93)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c/1%)	1.82287E+02 (12.3)	4.05500E+02 (18.3)	1.61734E+02 (11.6)
VR2 (c/2%)	9.83426E+01 (9.0)	7.22539E+01 (7.7)	
VR3 (c/3%)	1.20389E+02 (10.0)	1.25606E+02 (10.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.24436E+00	9.62100E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.809 (0.941)	1.712 (0.800)	4.293 (0.951)
- DOSE	1.742 (0.806)	0.783 (0.472)	1.964 (0.840)
- AMENDEMENT*DOSE	0.226 (0.199)	0.102 (0.097)	0.255 (0.220)
- SUBSIDIAIRE	3.996 (0.899)	5.438 (0.934)	
- AMENDEMENT*SUBSIDIAIRE	0.188 (0.329)	0.180 (0.322)	
- DOSE*SUBSIDIAIRE	0.563 (0.419)	0.540 (0.405)	
- AMENDEM*DOSE*SUBSID	0.966 (0.396)	0.926 (0.412)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.858 (0.970)	2.990 (0.914)	
- DOSE	2.222 (0.863)	1.368 (0.737)	
- AMENDEMENT*DOSE	0.289 (0.246)	0.178 (0.161)	
- SUBSIDIAIRE	2.749 (0.900)	1.692 (0.804)	
- AMENDEMENT*SUBSIDIAIRE	0.159 (0.305)	0.098 (0.246)	
- DOSE*SUBSIDIAIRE	0.474 (0.369)	0.292 (0.248)	
- AMENDEM*DOSE*SUBSID	0.814 (0.453)	0.501 (0.386)	

3.2.2. Analyses de variance des paramètres "sol" observés dans l'horizon (20-40)cm.

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: A2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	54.600	54.000	53.300	52.200	51.400	52.300	41.500	47.200	45.000	46.800	48.500	50.200
X 12k	54.400	55.000	51.400	52.000	47.700	50.500	48.900	46.500	39.300	36.600	46.500	49.700
X 13k	52.900	51.000	55.200	52.400	46.900	47.800	50.100	48.600	41.300	36.500	43.100	49.200
X 21k	54.900	57.100	51.900	50.800	52.800	54.000	40.200	40.500	47.100	49.500	37.600	38.300
X 22k	53.900	53.000	51.600	51.900	50.300	48.500	46.800	48.300	37.000	41.400	36.400	46.100
X 23k	54.400	58.000	50.600	49.200	55.500	54.700	46.000	47.000	50.100	49.700	47.100	48.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 48.628

X 1.. = 48.625 (-0.01) X 2..= 48.631 (0.01)

X .1. = 48.821 (0.40) X .2. = 47.654 (-2.00) X .3. = 49.408 (1.61)

X ..1 = 48.228 (-0.82) X ..2 = 49.028 (0.82)

X 11. = 49.750 (2.31) X 12. = 48.208 (-0.86) X 13. = 47.917 (-1.46)
X 21. = 47.892 (-1.51) X 22. = 47.100 (-3.14) X 23. = 50.900 (4.67)

X 1.1 = 48.444 (-0.38) X 1.2 = 48.806 (0.37) X 2.1 = 48.011 (-1.27) X 2.2 = 49.250 (1.28)

X .11 = 48.233 (-0.81) X .12 = 49.408 (1.61)
X .21 = 47.017 (-3.31) X .22 = 48.292 (-0.69)
X .31 = 49.433 (1.66) X .32 = 49.383 (1.55)

X 111 = 49.050 (0.87) X 121 = 48.033 (-1.22) X 131 = 48.250 (-0.78)
X 112 = 50.450 (3.75) X 122 = 48.383 (-0.50) X 132 = 47.583 (-2.15)
X 211 = 47.417 (-2.49) X 221 = 46.000 (-5.40) X 231 = 50.617 (4.09)
X 212 = 48.367 (-0.54) X 222 = 48.200 (-0.88) X 232 = 51.183 (5.26)

X 11 = 54.433 (11.94) X 12 = 51.875 (6.68) X 13 = 51.033 (4.95)
X 14 = 45.967 (-5.47) X 15 = 43.358 (-10.84) X 16 = 45.100 (-7.25)

X m1 = 48.008 (-1.27) X m2 = 49.000 (0.77) X m3 = 47.425 (-2.47)
X m4 = 49.775 (2.36) X m5 = 48.825 (0.41) X m6 = 48.733 (0.22)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.37829E+01 (10.0)	6.89002E+01 (17.1)	2.77276E+01 (10.8)
VR2 (cv2%)	7.54567E+00 (5.6)	1.56267E+00 (2.6)	
VR3 (cv3%)	3.45920E+00 (3.8)	4.65580E+00 (4.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.88747E+01	4.28666E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.000 (0.008)	0.000 (0.007)	0.000 (0.008)
- DOSE	0.805 (0.462)	0.278 (0.237)	0.690 (0.485)
- AMENDEMENT*DOSE	1.713 (0.801)	0.591 (0.434)	1.470 (0.747)
- SUBSIDIAIRE	1.527 (0.729)	7.372 (0.959)	
- AMENDEMENT*SUBSIDIAIRE	1.002 (0.672)	0.745 (0.401)	
- DOSE*SUBSIDIAIRE	0.944 (0.405)	0.702 (0.491)	
- AMENDEM*DOSE*SUBSID	0.615 (0.447)	0.457 (0.356)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.000 (0.010)	0.000 (0.008)	
- DOSE	1.595 (0.788)	0.637 (0.462)	
- AMENDEMENT*DOSE	3.396 (0.960)	1.356 (0.734)	
- SUBSIDIAIRE	0.960 (0.333)	0.383 (0.454)	
- AMENDEMENT*SUBSIDIAIRE	0.289 (0.400)	0.115 (0.265)	
- DOSE*SUBSIDIAIRE	0.272 (0.234)	0.109 (0.103)	
- AMENDEM*DOSE*SUBSID	0.177 (0.161)	0.071 (0.069)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: LF2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	16.800	16.300	16.600	16.300	17.400	16.000	13.500	14.500	15.800	14.700	16.200	15.200
X 12k	17.300	16.100	15.000	15.500	15.800	16.500	18.000	17.500	14.700	15.000	16.500	15.600
X 13k	15.700	17.900	15.500	17.700	15.600	15.400	15.600	16.100	16.200	15.200	14.800	16.900
X 21k	15.800	15.300	16.600	16.800	15.000	16.200	14.200	15.100	17.700	14.500	14.600	15.700
X 22k	16.400	15.700	15.000	15.800	16.700	15.200	15.200	14.500	14.800	13.800	16.100	18.700
X 23k	16.500	14.700	15.700	16.900	15.600	15.900	17.700	15.900	16.100	15.900	15.200	15.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 15.871

X 1.. = 15.983 (0.71) X 2..= 15.758 (-0.71)

X .1. = 15.700 (-1.08) X .2. = 15.892 (0.13) X .3. = 16.021 (0.95)

X ..1 = 15.886 (0.10) X ..2 = 15.856 (-0.10)

X 11. = 15.775 (-0.60) X 12. = 16.125 (1.60) X 13. = 16.050 (1.13)
X 21. = 15.625 (-1.55) X 22. = 15.658 (-1.34) X 23. = 15.992 (0.76)

X 1.1 = 15.944 (0.46) X 1.2 = 16.022 (0.95) X 2.1 = 15.828 (-0.27) X 2.2 = 15.689 (-1.15)

X .11 = 15.850 (-0.13) X .12 = 15.550 (-2.02)
X .21 = 15.958 (0.55) X .22 = 15.825 (-0.29)
X .31 = 15.850 (-0.13) X .32 = 16.192 (2.02)

X 111 = 16.050 (1.13) X 121 = 16.217 (2.18) X 131 = 15.567 (-1.92)
X 112 = 15.500 (-2.34) X 122 = 16.033 (1.02) X 132 = 16.533 (4.17)
X 211 = 15.650 (-1.39) X 221 = 15.700 (-1.08) X 231 = 16.133 (1.65)
X 212 = 15.600 (-1.71) X 222 = 15.617 (-1.60) X 232 = 15.850 (-0.13)

X 11 = 16.208 (2.13) X 12 = 16.117 (1.55) X 13 = 15.942 (0.45)
X 14 = 15.650 (-1.39) X 15 = 15.367 (-3.18) X 16 = 15.942 (0.45)

X m1 = 16.017 (0.92) X m2 = 15.533 (-2.13) X m3 = 16.667 (5.01)
X m4 = 15.825 (-0.29) X m5 = 15.400 (-2.97) X m6 = 15.783 (-0.55)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.50092E+00 (7.7)	1.25485E+00 (7.1)	1.27617E+00 (7.1)
VR2 (cv2%)	1.45114E+00 (7.6)	5.10139E-01 (4.5)	
VR3 (cv3%)	7.11539E-01 (5.3)	8.99739E-01 (6.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.20302E+00	1.53806E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.607 (0.449)	0.726 (0.407)	0.714 (0.413)
- DOSE	0.417 (0.331)	0.498 (0.381)	0.490 (0.376)
- AMENDEMENT*DOSE	0.183 (0.166)	0.219 (0.194)	0.216 (0.191)
- SUBSIDIAIRE	0.012 (0.085)	0.033 (0.143)	
- AMENDEMENT*SUBSIDIAIRE	0.297 (0.403)	0.235 (0.363)	
- DOSE*SUBSIDIAIRE	0.935 (0.408)	0.739 (0.492)	
- AMENDEM*DOSE*SUBSID	1.773 (0.811)	1.402 (0.736)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.827 (0.370)	0.909 (0.347)	
- DOSE	0.568 (0.424)	0.624 (0.455)	
- AMENDEMENT*DOSE	0.250 (0.217)	0.275 (0.235)	
- SUBSIDIAIRE	0.015 (0.102)	0.017 (0.107)	
- AMENDEMENT*SUBSIDIAIRE	0.192 (0.333)	0.211 (0.347)	
- DOSE*SUBSIDIAIRE	0.604 (0.445)	0.663 (0.476)	
- AMENDEM*DOSE*SUBSID	1.145 (0.673)	1.258 (0.707)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: LG2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	9.700	9.800	9.500	9.600	8.000	8.700	7.600	8.500	9.300	9.200	9.900	9.100
X 12k	8.600	9.100	8.600	9.600	8.600	8.900	7.800	7.800	7.800	7.700	9.000	9.300
X 13k	10.000	9.600	8.400	7.200	8.100	9.000	9.400	9.000	7.700	5.900	7.500	8.800
X 21k	9.700	9.400	9.400	8.000	8.900	8.500	7.800	8.400	7.200	9.500	8.500	9.800
X 22k	9.500	9.100	9.100	8.700	9.300	9.700	9.100	9.300	8.700	8.800	7.400	9.100
X 23k	8.800	8.700	8.800	9.600	8.900	8.900	9.300	9.400	7.800	9.400	7.900	7.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 8.757

X 1.. = 8.675 (-0.94) X 2..= 8.839 (0.94)

X .1. = 8.917 (1.82) X .2. = 8.775 (0.21) X .3. = 8.579 (-2.03)

X ..1 = 8.656 (-1.16) X ..2 = 8.858 (1.16)

X 11. = 9.075 (3.63) X 12. = 8.567 (-2.17) X 13. = 8.383 (-4.27)
X 21. = 8.758 (0.02) X 22. = 8.983 (2.59) X 23. = 8.775 (0.21)

X 1.1 = 8.639 (-1.35) X 1.2 = 8.711 (-0.52) X 2.1 = 8.672 (-0.97) X 2.2 = 9.006 (2.84)

X .11 = 8.792 (0.40) X .12 = 9.042 (3.25)
X .21 = 8.625 (-1.51) X .22 = 8.925 (1.92)
X .31 = 8.550 (-2.36) X .32 = 8.608 (-1.70)

X 111 = 9.000 (2.78) X 121 = 8.400 (-4.08) X 131 = 8.517 (-2.74)
X 112 = 9.150 (4.49) X 122 = 8.733 (-0.27) X 132 = 8.250 (-5.79)
X 211 = 8.583 (-1.98) X 221 = 8.850 (1.06) X 231 = 8.583 (-1.98)
X 212 = 8.933 (2.01) X 222 = 9.117 (4.11) X 232 = 8.967 (2.39)

X 11 = 9.333 (6.58) X 12 = 8.875 (1.35) X 13 = 8.792 (0.40)
X 14 = 8.617 (-1.60) X 15 = 8.250 (-5.79) X 16 = 8.675 (-0.94)

X m1 = 8.692 (-0.75) X m2 = 8.683 (-0.84) X m3 = 8.383 (-4.27)
X m4 = 9.308 (6.30) X m5 = 8.533 (-2.55) X m6 = 8.942 (2.11)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.07606E-01 (10.3)	8.52406E-01 (10.5)	6.87056E-01 (9.5)
VR2 (cv2%)	2.65806E-01 (5.9)	2.45139E-01 (5.7)	
VR3 (cv3%)	4.23606E-01 (7.4)	4.27739E-01 (7.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.35750E+00	3.98254E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.599 (0.452)	0.567 (0.465)	0.704 (0.416)
- DOSE	0.854 (0.441)	0.809 (0.460)	1.003 (0.617)
- AMENDEMENT*DOSE	1.288 (0.707)	1.220 (0.688)	1.514 (0.757)
- SUBSIDIAIRE	2.785 (0.845)	3.019 (0.858)	
- AMENDEMENT*SUBSIDIAIRE	0.724 (0.407)	0.717 (0.410)	
- DOSE*SUBSIDIAIRE	0.230 (0.202)	0.228 (0.200)	
- AMENDEM*DOSE*SUBSID	0.465 (0.361)	0.460 (0.358)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.861 (0.361)	0.835 (0.368)	
- DOSE	1.228 (0.699)	1.190 (0.687)	
- AMENDEMENT*DOSE	1.853 (0.834)	1.795 (0.825)	
- SUBSIDIAIRE	1.318 (0.745)	1.278 (0.737)	
- AMENDEMENT*SUBSIDIAIRE	0.546 (0.470)	0.530 (0.477)	
- DOSE*SUBSIDIAIRE	0.174 (0.158)	0.169 (0.154)	
- AMENDEM*DOSE*SUBSID	0.351 (0.289)	0.340 (0.282)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: SF2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	11.300	10.800	11.900	12.200	13.100	13.100	14.300	14.600	16.100	15.400	15.300	14.500
X 12k	11.900	10.500	13.200	12.800	15.300	13.600	14.800	14.100	15.200	16.400	16.700	15.600
X 13k	11.700	12.000	11.500	13.900	16.800	15.400	14.100	14.300	13.300	17.100	11.700	14.400
X 21k	11.100	11.300	13.500	12.800	12.900	12.500	14.800	17.100	17.400	16.500	16.300	16.300
X 22k	11.500	11.400	14.100	13.200	13.000	14.700	16.400	15.300	15.700	16.400	15.200	16.000
X 23k	11.400	10.000	13.600	13.900	11.300	11.300	14.900	16.400	15.300	14.100	18.100	16.900

2 - MOYENNES ET ECARTS RELATIFS

X ... = 14.049

X 1.. = 13.858 (-1.35) X 2..= 14.239 (1.35)

X .1. = 13.962 (-0.61) X .2. = 14.292 (1.73) X .3. = 13.892 (-1.12)

X ..1 = 14.019 (-0.21) X ..2 = 14.078 (0.21)

X 11. = 13.550 (-3.55) X 12. = 14.175 (0.90) X 13. = 13.850 (-1.41)
X 21. = 14.375 (2.32) X 22. = 14.408 (2.56) X 23. = 13.933 (-0.82)

X 1.1 = 13.789 (-1.85) X 1.2 = 13.928 (-0.86) X 2.1 = 14.250 (1.43) X 2.2 = 14.228 (1.28)

X .11 = 14.000 (-0.35) X .12 = 13.925 (-0.88)
X .21 = 14.417 (2.62) X .22 = 14.167 (0.84)
X .31 = 13.642 (-2.90) X .32 = 14.142 (0.66)

X 111 = 13.667 (-2.72) X 121 = 14.517 (3.33) X 131 = 13.183 (-6.16)
X 112 = 13.433 (-4.38) X 122 = 13.833 (-1.53) X 132 = 14.517 (3.33)
X 211 = 14.333 (2.03) X 221 = 14.317 (1.91) X 231 = 14.100 (0.37)
X 212 = 14.417 (2.62) X 222 = 14.500 (3.21) X 232 = 13.767 (-2.01)

X 11 = 11.242 (-19.98) X 12 = 13.050 (-7.11) X 13 = 13.583 (-3.31)
X 14 = 15.092 (7.42) X 15 = 15.742 (12.05) X 16 = 15.583 (10.92)

X m1 = 13.642 (-2.90) X m2 = 13.358 (-4.91) X m3 = 13.983 (-0.46)
X m4 = 14.150 (0.72) X m5 = 14.908 (6.12) X m6 = 14.250 (1.43)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.42947E+00 (11.1)	9.13321E+00 (21.5)	2.17506E+00 (10.5)
VR2 (cv2%)	4.45583E-01 (4.8)	6.43583E-01 (5.7)	
VR3 (cv3%)	8.02983E-01 (6.4)	7.63383E-01 (6.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.83311E+00	3.37381E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.073 (0.689)	0.285 (0.396)	1.199 (0.713)
- DOSE	0.450 (0.352)	0.120 (0.113)	0.503 (0.384)
- AMENDEMENT*DOSE	0.380 (0.307)	0.101 (0.096)	0.424 (0.335)
- SUBSIDIAIRE	0.137 (0.276)	0.095 (0.234)	
- AMENDEMENT*SUBSIDIAIRE	0.145 (0.293)	0.153 (0.299)	
- DOSE*SUBSIDIAIRE	1.150 (0.667)	1.210 (0.685)	
- AMENDEM*DOSE*SUBSID	3.317 (0.949)	3.489 (0.955)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.839 (0.822)	0.636 (0.435)	
- DOSE	0.771 (0.472)	0.267 (0.230)	
- AMENDEMENT*DOSE	0.651 (0.469)	0.225 (0.198)	
- SUBSIDIAIRE	0.043 (0.170)	0.015 (0.101)	
- AMENDEMENT*SUBSIDIAIRE	0.082 (0.228)	0.028 (0.139)	
- DOSE*SUBSIDIAIRE	0.652 (0.470)	0.225 (0.199)	
- AMENDEM*DOSE*SUBSID	1.879 (0.838)	0.650 (0.469)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: S62
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	4.600	5.000	4.500	6.300	5.600	5.500	19.200	11.100	10.100	8.500	5.000	5.500
X 12k	5.700	6.300	6.000	4.700	6.900	6.900	6.200	9.000	19.500	20.500	6.500	5.000
X 13k	6.400	7.300	4.400	4.700	8.900	7.700	5.700	7.400	15.300	19.900	17.700	6.900
X 21k	5.700	4.700	5.900	6.300	4.800	4.500	18.100	15.300	6.700	5.300	20.000	16.700
X 22k	6.200	5.600	5.200	5.000	5.800	7.100	7.800	8.000	18.400	15.500	20.200	5.800
X 23k	4.800	4.800	6.100	5.300	4.100	4.100	6.800	6.900	5.800	6.000	7.000	6.300

2 - MOYENNES ET ECARTS RELATIFS

X ... = 8.319

X 1.. = 8.511 (2.30) X 2..= 8.128 (-2.30)

X .1. = 8.538 (2.62) X .2. = 8.908 (7.08) X .3. = 7.512 (-9.70)

X ..1 = 8.822 (6.04) X ..2 = 7.817 (-6.04)

X 11. = 7.575 (-8.95) X 12. = 8.600 (3.37) X 13. = 9.358 (12.49)
X 21. = 9.500 (14.19) X 22. = 9.217 (10.78) X 23. = 5.667 (-31.89)

X 1.1 = 8.789 (5.64) X 1.2 = 8.233 (-1.04) X 2.1 = 8.856 (6.44) X 2.2 = 7.400 (-11.05)

X .11 = 9.183 (10.38) X .12 = 7.892 (-5.14)
X .21 = 9.533 (14.59) X .22 = 8.283 (-0.43)
X .31 = 7.750 (-6.84) X .32 = 7.275 (-12.55)

X 111 = 8.167 (-1.84) X 121 = 8.467 (1.77) X 131 = 9.733 (16.99)
X 112 = 6.983 (-16.06) X 122 = 8.733 (4.97) X 132 = 8.983 (7.98)
X 211 = 10.200 (22.60) X 221 = 10.600 (27.41) X 231 = 5.767 (-30.68)
X 212 = 8.800 (5.78) X 222 = 7.833 (-5.84) X 232 = 5.567 (-33.09)

X 11 = 5.592 (-32.79) X 12 = 5.367 (-35.49) X 13 = 5.992 (-27.98)
X 14 = 10.125 (21.70) X 15 = 12.625 (51.75) X 16 = 10.217 (22.80)

X m1 = 9.392 (12.89) X m2 = 9.175 (10.28) X m3 = 9.183 (10.38)
X m4 = 6.492 (-21.97) X m5 = 7.892 (-5.14) X m6 = 7.783 (-6.44)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.10240E+01 (67.0)	5.04814E+01 (85.4)	3.49165E+01 (71.0)
VR2 (cv2%)	1.21846E+01 (42.0)	1.90656E+00 (16.6)	
VR3 (cv3%)	5.54089E+00 (28.3)	7.59649E+00 (33.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.51766E+01	2.57690E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.085 (0.230)	0.052 (0.185)	0.076 (0.218)
- DOSE	0.404 (0.323)	0.249 (0.215)	0.359 (0.294)
- AMENDEMENT*DOSE	1.670 (0.793)	1.027 (0.626)	1.484 (0.750)
- SUBSIDIAIRE	1.494 (0.724)	9.546 (0.973)	
- AMENDEMENT*SUBSIDIAIRE	0.658 (0.430)	0.480 (0.498)	
- DOSE*SUBSIDIAIRE	0.229 (0.201)	0.167 (0.152)	
- AMENDEM*DOSE*SUBSID	0.964 (0.397)	0.703 (0.491)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.161 (0.308)	0.109 (0.259)	
- DOSE	0.765 (0.475)	0.519 (0.396)	
- AMENDEMENT*DOSE	3.160 (0.950)	2.143 (0.874)	
- SUBSIDIAIRE	1.110 (0.702)	0.753 (0.394)	
- AMENDEMENT*SUBSIDIAIRE	0.222 (0.356)	0.151 (0.299)	
- DOSE*SUBSIDIAIRE	0.077 (0.075)	0.052 (0.051)	
- AMENDEM*DOSE*SUBSID	0.326 (0.272)	0.221 (0.195)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: HCC2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	54.400	50.500	53.100	49.100	51.700	51.400	39.700	43.400	43.700	44.800	46.600	46.500
X 12k	55.700	58.400	47.400	50.600	49.100	51.300	50.900	48.000	37.700	36.100	45.100	44.800
X 13k	52.900	50.200	52.700	52.300	49.500	48.900	45.300	45.300	40.200	37.300	40.500	45.700
X 21k	55.500	54.600	51.900	51.900	48.400	53.900	37.600	38.500	47.100	46.800	35.500	36.000
X 22k	53.000	54.600	50.500	49.000	52.600	48.300	43.600	47.700	37.100	39.500	35.400	45.700
X 23k	54.000	56.600	50.300	46.000	55.300	53.400	40.700	43.200	49.600	46.000	42.900	48.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 47.389

X 1.. = 47.522 (0.28) X 2..= 47.256 (-0.28)

X .1. = 47.192 (-0.42) X .2. = 47.171 (-0.46) X .3. = 47.804 (0.88)

X ..1 = 47.144 (-0.52) X ..2 = 47.633 (0.52)

X 11. = 47.908 (1.10) X 12. = 47.925 (1.13) X 13. = 46.733 (-1.38)
X 21. = 46.475 (-1.93) X 22. = 46.417 (-2.05) X 23. = 48.875 (3.14)

X 1.1 = 47.567 (0.38) X 1.2 = 47.478 (0.19) X 2.1 = 46.722 (-1.41) X 2.2 = 47.789 (0.84)

X .11 = 47.100 (-0.61) X .12 = 47.283 (-0.22)
X .21 = 46.508 (-1.86) X .22 = 47.833 (0.94)
X .31 = 47.825 (0.92) X .32 = 47.783 (0.83)

X 111 = 48.200 (1.71) X 121 = 47.650 (0.55) X 131 = 46.850 (-1.14)
X 112 = 47.617 (0.48) X 122 = 48.200 (1.71) X 132 = 46.617 (-1.63)
X 211 = 46.000 (-2.93) X 221 = 45.367 (-4.27) X 231 = 48.800 (2.98)
X 212 = 46.950 (-0.93) X 222 = 47.467 (0.16) X 232 = 48.950 (3.29)

X 11 = 54.200 (14.37) X 12 = 50.400 (6.35) X 13 = 51.150 (7.94)
X 14 = 43.658 (-7.87) X 15 = 42.158 (-11.04) X 16 = 42.767 (-9.75)

X m1 = 47.133 (-0.54) X m2 = 47.200 (-0.40) X m3 = 46.958 (-0.91)
X m4 = 48.025 (1.34) X m5 = 47.700 (0.66) X m6 = 47.317 (-0.15)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.35934E+01 (10.2)	8.66902E+01 (19.6)	2.90159E+01 (11.4)
VR2 (cv2%)	9.00722E+00 (6.3)	9.17189E+00 (6.4)	
VR3 (cv3%)	5.20469E+00 (4.8)	5.17176E+00 (4.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.20280E+01	3.89537E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.054 (0.188)	0.015 (0.100)	0.044 (0.170)
- DOSE	0.132 (0.123)	0.036 (0.035)	0.107 (0.102)
- AMENDEMENT*DOSE	1.107 (0.653)	0.301 (0.254)	0.900 (0.425)
- SUBSIDIAIRE	0.478 (0.476)	0.469 (0.472)	
- AMENDEMENT*SUBSIDIAIRE	1.155 (0.707)	1.162 (0.709)	
- DOSE*SUBSIDIAIRE	0.619 (0.449)	0.623 (0.451)	
- AMENDEM*DOSE*SUBSID	0.129 (0.120)	0.130 (0.121)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.099 (0.247)	0.034 (0.150)	
- DOSE	0.240 (0.210)	0.081 (0.079)	
- AMENDEMENT*DOSE	2.018 (0.858)	0.684 (0.486)	
- SUBSIDIAIRE	0.332 (0.426)	0.113 (0.262)	
- AMENDEMENT*SUBSIDIAIRE	0.464 (0.494)	0.157 (0.304)	
- DOSE*SUBSIDIAIRE	0.249 (0.216)	0.084 (0.081)	
- AMENDEM*DOSE*SUBSID	0.052 (0.051)	0.018 (0.017)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: HPFP2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	33.300	31.200	34.600	32.100	32.600	33.600	25.600	28.500	28.600	27.900	30.100	31.000
X 12k	30.700	31.200	31.800	34.500	28.700	30.400	32.100	28.800	24.300	24.400	29.800	30.000
X 13k	34.700	32.900	33.800	33.700	30.300	29.500	31.100	32.000	26.500	24.500	27.800	30.800
X 21k	30.200	31.300	33.600	34.300	32.200	33.900	25.400	25.900	30.100	30.200	24.500	24.600
X 22k	35.700	30.800	34.300	31.500	32.300	29.700	29.500	27.900	24.700	26.600	24.300	31.500
X 23k	32.200	31.300	31.600	31.400	34.400	35.400	29.100	30.000	33.200	31.200	30.300	33.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 30.437

X 1.. = 30.372 (-0.21) X 2..= 30.503 (0.21)

X .1. = 30.221 (-0.71) X .2. = 29.812 (-2.05) X .3. = 31.279 (2.77)

X ..1 = 30.389 (-0.16) X ..2 = 30.486 (0.16)

X 11. = 30.758 (1.05) X 12. = 29.725 (-2.34) X 13. = 30.633 (0.64)
X 21. = 29.683 (-2.48) X 22. = 29.900 (-1.77) X 23. = 31.925 (4.89)

X 1.1 = 30.356 (-0.27) X 1.2 = 30.389 (-0.16) X 2.1 = 30.422 (-0.05) X 2.2 = 30.583 (0.48)

X .11 = 30.067 (-1.22) X .12 = 30.375 (-0.21)
X .21 = 29.850 (-1.93) X .22 = 29.775 (-2.18)
X .31 = 31.250 (2.67) X .32 = 31.308 (2.86)

X 111 = 30.800 (1.19) X 121 = 29.567 (-2.86) X 131 = 30.700 (0.86)
X 112 = 30.717 (0.92) X 122 = 29.883 (-1.82) X 132 = 30.567 (0.42)
X 211 = 29.333 (-3.63) X 221 = 30.133 (-1.00) X 231 = 31.800 (4.48)
X 212 = 30.033 (-1.33) X 222 = 29.667 (-2.53) X 232 = 32.050 (5.30)

X 11 = 32.125 (5.54) X 12 = 33.100 (8.75) X 13 = 31.917 (4.86)
X 14 = 28.825 (-5.30) X 15 = 27.683 (-9.05) X 16 = 28.975 (-4.80)

X ■1 = 30.258 (-0.59) X ■2 = 30.083 (-1.16) X ■3 = 30.158 (-0.92)
X ■4 = 30.492 (0.18) X ■5 = 30.858 (1.38) X ■6 = 30.775 (1.11)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	9.04618E+00 (9.9)	2.05276E+01 (14.9)	1.09901E+01 (10.9)
VR2 (cv2%)	4.63447E+00 (7.1)	1.57281E+00 (4.1)	
VR3 (cv3%)	2.48307E+00 (5.2)	3.09541E+00 (5.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.76005E+00	2.27367E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.034 (0.150)	0.015 (0.101)	0.028 (0.137)
- DOSE	1.520 (0.763)	0.670 (0.475)	1.251 (0.697)
- AMENDEMENT*DOSE	0.930 (0.410)	0.410 (0.327)	0.765 (0.482)
- SUBSIDIAIRE	0.037 (0.151)	0.108 (0.248)	
- AMENDEMENT*SUBSIDIAIRE	0.030 (0.141)	0.024 (0.127)	
- DOSE*SUBSIDIAIRE	0.092 (0.088)	0.073 (0.071)	
- AMENDEM*DOSE*SUBSID	0.400 (0.321)	0.321 (0.268)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.058 (0.194)	0.031 (0.145)	
- DOSE	2.583 (0.916)	1.387 (0.742)	
- AMENDEMENT*DOSE	1.580 (0.785)	0.848 (0.438)	
- SUBSIDIAIRE	0.032 (0.147)	0.017 (0.108)	
- AMENDEMENT*SUBSIDIAIRE	0.014 (0.097)	0.007 (0.071)	
- DOSE*SUBSIDIAIRE	0.043 (0.042)	0.023 (0.022)	
- AMENDEM*DOSE*SUBSID	0.187 (0.168)	0.100 (0.096)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: RU2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	21.100	19.300	18.500	17.000	19.100	17.800	14.100	14.900	15.100	16.900	16.500	15.500
X 12k	25.000	27.200	15.600	16.100	20.400	20.900	18.800	19.200	13.400	11.700	15.300	14.800
X 13k	18.200	17.300	18.900	18.600	19.200	19.400	14.200	13.300	13.700	12.800	12.700	14.900
X 21k	25.300	23.300	18.300	17.600	16.200	20.000	12.200	12.600	17.000	16.600	11.000	11.400
X 22k	17.300	23.800	16.200	17.500	20.300	18.600	14.100	19.800	12.400	12.900	11.100	14.200
X 23k	21.800	25.300	18.700	14.600	20.900	18.000	11.600	13.200	16.400	14.800	12.600	15.500

2 - MOYENNES ET ECARTS RELATIFS

X ... = 16.951

X 1.. = 17.150 (1.17) X 2..= 16.753 (-1.17)

X .1. = 16.971 (0.11) X .2. = 17.358 (2.40) X .3. = 16.525 (-2.52)

X ..1 = 16.756 (-1.16) X ..2 = 17.147 (1.16)

X 11. = 17.150 (1.17) X 12. = 18.200 (7.37) X 13. = 16.100 (-5.02)
X 21. = 16.792 (-0.94) X 22. = 16.517 (-2.56) X 23. = 16.950 (-0.01)

X 1.1 = 17.211 (1.53) X 1.2 = 17.089 (0.81) X 2.1 = 16.300 (-3.84) X 2.2 = 17.206 (1.50)

X .11 = 17.033 (0.48) X .12 = 16.908 (-0.25)
X .21 = 16.658 (-1.73) X .22 = 18.058 (6.53)
X .31 = 16.575 (-2.22) X .32 = 16.475 (-2.81)

X 111 = 17.400 (2.65) X 121 = 18.083 (6.68) X 131 = 16.150 (-4.73)
X 112 = 16.900 (-0.30) X 122 = 18.317 (8.05) X 132 = 16.050 (-5.32)
X 211 = 16.667 (-1.68) X 221 = 15.233 (-10.14) X 231 = 17.000 (0.29)
X 212 = 16.917 (-0.20) X 222 = 17.800 (5.01) X 232 = 16.900 (-0.30)

X 11 = 22.075 (30.23) X 12 = 17.300 (2.06) X 13 = 19.233 (13.46)
X 14 = 14.833 (-12.49) X 15 = 14.475 (-14.61) X 16 = 13.792 (-18.64)

X m1 = 16.875 (-0.45) X m2 = 17.117 (0.98) X m3 = 16.800 (-0.89)
X m4 = 17.533 (3.43) X m5 = 16.842 (-0.65) X m6 = 16.542 (-2.42)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.73234E+00 (17.4)	3.35042E+01 (34.1)	1.05706E+01 (19.2)
VR2 (cv2%)	2.79692E+00 (9.9)	5.12092E+00 (13.3)	
VR3 (cv3%)	2.35745E+00 (9.1)	1.89265E+00 (8.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	9.62705E+00	3.88368E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.325 (0.420)	0.085 (0.230)	0.269 (0.385)
- DOSE	0.478 (0.369)	0.125 (0.117)	0.395 (0.317)
- AMENDEMENT*DOSE	1.103 (0.652)	0.288 (0.244)	0.911 (0.421)
- SUBSIDIAIRE	0.987 (0.368)	0.539 (0.500)	
- AMENDEMENT*SUBSIDIAIRE	2.016 (0.835)	2.512 (0.878)	
- DOSE*SUBSIDIAIRE	1.941 (0.837)	2.418 (0.892)	
- AMENDEM*DOSE*SUBSID	0.903 (0.421)	1.125 (0.659)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.574 (0.459)	0.191 (0.332)	
- DOSE	0.843 (0.440)	0.281 (0.240)	
- AMENDEMENT*DOSE	1.946 (0.848)	0.648 (0.468)	
- SUBSIDIAIRE	0.558 (0.465)	0.186 (0.328)	
- AMENDEMENT*SUBSIDIAIRE	0.960 (0.333)	0.320 (0.419)	
- DOSE*SUBSIDIAIRE	0.924 (0.406)	0.308 (0.259)	
- AMENDEM*DOSE*SUBSID	0.430 (0.341)	0.143 (0.133)	

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.190	2.830	2.410	2.450	2.100	2.260	1.980	2.130	2.140	2.030	2.230	2.160
X 12k	1.860	2.170	2.460	2.110	2.330	1.860	1.750	1.890	2.260	2.240	2.110	2.080
X 13k	1.970	2.310	2.330	2.260	1.860	1.990	2.140	2.070	2.350	2.230	2.080	2.210
X 21k	1.910	2.040	2.140	2.120	2.350	1.820	2.300	2.290	2.030	1.790	1.950	2.370
X 22k	2.100	2.190	1.880	2.300	2.110	2.140	1.760	1.880	2.330	1.940	2.070	2.350
X 23k	2.370	2.190	2.250	2.630	1.610	1.850	2.590	1.920	1.740	1.090	2.010	1.810

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.112

X 1.. = 2.162 (2.37) X 2..= 2.062 (-2.37)

X .1. = 2.167 (2.64) X .2. = 2.090 (-1.01) X .3. = 2.077 (-1.62)

X ..1 = 2.112 (0.03) X ..2 = 2.111 (-0.03)

X 11. = 2.242 (6.19) X 12. = 2.093 (-0.87) X 13. = 2.150 (1.81)
X 21. = 2.092 (-0.91) X 22. = 2.087 (-1.15) X 23. = 2.005 (-5.06)

X 1.1 = 2.142 (1.41) X 1.2 = 2.182 (3.33) X 2.1 = 2.083 (-1.35) X 2.2 = 2.040 (-3.40)

X .11 = 2.144 (1.53) X .12 = 2.191 (3.74)
X .21 = 2.085 (-1.27) X .22 = 2.096 (-0.76)
X .31 = 2.108 (-0.16) X .32 = 2.047 (-3.08)

X 111 = 2.175 (2.99) X 121 = 2.128 (0.78) X 131 = 2.122 (0.47)
X 112 = 2.310 (9.39) X 122 = 2.058 (-2.53) X 132 = 2.178 (3.15)
X 211 = 2.113 (0.07) X 221 = 2.042 (-3.32) X 231 = 2.095 (-0.80)
X 212 = 2.072 (-1.90) X 222 = 2.133 (1.02) X 232 = 1.915 (-9.32)

X L1 = 2.177 (3.11) X L2 = 2.278 (7.89) X L3 = 2.023 (-4.19)
X L4 = 2.058 (-2.53) X L5 = 2.014 (-4.62) X L6 = 2.119 (0.35)

X M1 = 2.108 (-0.16) X M2 = 2.168 (2.68) X M3 = 2.180 (3.23)
X M4 = 2.137 (1.22) X M5 = 2.038 (-3.48) X M6 = 2.038 (-3.48)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	8.33774E-02 (13.7)	9.92207E-02 (14.9)	9.26331E-02 (14.4)
VR2 (cv2%)	8.09914E-02 (13.5)	2.72681E-02 (7.8)	
VR3 (cv3%)	3.99107E-02 (9.5)	5.06554E-02 (10.7)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.12876E+00	4.00406E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.171 (0.850)	1.824 (0.814)	1.954 (0.825)
- DOSE	0.682 (0.481)	0.573 (0.424)	0.614 (0.446)
- AMENDEMENT*DOSE	0.482 (0.371)	0.405 (0.324)	0.434 (0.341)
- SUBSIDIAIRE	0.000 (0.018)	0.001 (0.028)	
- AMENDEMENT*SUBSIDIAIRE	0.793 (0.385)	0.625 (0.442)	
- DOSE*SUBSIDIAIRE	0.458 (0.357)	0.361 (0.295)	
- AMENDEM*DOSE*SUBSID	1.733 (0.804)	1.366 (0.727)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.948 (0.912)	2.672 (0.895)	
- DOSE	0.926 (0.405)	0.839 (0.442)	
- AMENDEMENT*DOSE	0.654 (0.471)	0.593 (0.439)	
- SUBSIDIAIRE	0.001 (0.021)	0.001 (0.020)	
- AMENDEMENT*SUBSIDIAIRE	0.516 (0.483)	0.467 (0.496)	
- DOSE*SUBSIDIAIRE	0.298 (0.252)	0.270 (0.232)	
- AMENDEM*DOSE*SUBSID	1.127 (0.667)	1.021 (0.631)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: N2
unite : %.

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.770	2.220	1.810	1.550	1.550	1.680	1.560	1.770	1.800	1.700	1.920	1.900
X 12k	1.560	1.760	1.920	1.670	1.780	1.470	1.450	1.610	1.870	1.840	1.740	1.720
X 13k	1.560	1.870	1.970	1.760	1.490	1.590	1.740	1.650	1.970	1.940	1.810	1.870
X 21k	1.590	1.670	1.670	1.630	1.800	1.450	1.780	1.810	1.730	1.630	1.620	1.970
X 22k	1.720	1.720	1.490	1.760	1.600	1.630	1.470	1.570	1.850	1.490	1.720	1.960
X 23k	1.870	1.760	1.740	2.130	1.280	1.400	2.050	1.550	1.520	1.570	1.660	1.610

2 - MOYENNES ET ECARTS RELATIFS

X ... = 1.713

X 1.. = 1.746 (1.92) X 2..= 1.680 (-1.92)

X .1. = 1.732 (1.16) X .2. = 1.682 (-1.78) X .3. = 1.723 (0.62)

X ..1 = 1.706 (-0.36) X ..2 = 1.719 (0.36)

X 11. = 1.769 (3.30) X 12. = 1.699 (-0.79) X 13. = 1.768 (3.25)
X 21. = 1.696 (-0.98) X 22. = 1.665 (-2.78) X 23. = 1.678 (-2.00)

X 1.1 = 1.737 (1.44) X 1.2 = 1.754 (2.41) X 2.1 = 1.676 (-2.17) X 2.2 = 1.684 (-1.68)

X .11 = 1.717 (0.24) X .12 = 1.748 (2.08)
X .21 = 1.681 (-1.86) X .22 = 1.683 (-1.71)
X .31 = 1.722 (0.53) X .32 = 1.725 (0.72)

X 111 = 1.735 (1.31) X 121 = 1.720 (0.43) X 131 = 1.757 (2.57)
X 112 = 1.803 (5.30) X 122 = 1.678 (-2.00) X 132 = 1.780 (3.93)
X 211 = 1.698 (-0.84) X 221 = 1.642 (-4.14) X 231 = 1.687 (-1.52)
X 212 = 1.693 (-1.13) X 222 = 1.688 (-1.42) X 232 = 1.670 (-2.49)

X L1 = 1.756 (2.52) X L2 = 1.758 (2.67) X L3 = 1.560 (-8.91)
X L4 = 1.667 (-2.64) X L5 = 1.742 (1.74) X L6 = 1.792 (4.61)

X M1 = 1.699 (-0.79) X M2 = 1.722 (0.58) X M3 = 1.753 (2.38)
X M4 = 1.726 (0.77) X M5 = 1.672 (-2.34) X M6 = 1.702 (-0.59)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.18894E-02 (10.4)	4.75394E-02 (12.7)	3.75681E-02 (11.3)
VR2 (cv2%)	2.61025E-02 (9.4)	1.29258E-02 (6.6)	
VR3 (cv3%)	2.76138E-02 (9.7)	3.02492E-02 (10.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.42110E-01	2.98377E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.446 (0.873)	1.641 (0.790)	2.077 (0.838)
- DOSE	0.543 (0.407)	0.364 (0.297)	0.461 (0.359)
- AMENDEMENT*DOSE	0.155 (0.142)	0.104 (0.099)	0.131 (0.122)
- SUBSIDIAIRE	0.108 (0.248)	0.218 (0.338)	
- AMENDEMENT*SUBSIDIAIRE	0.011 (0.087)	0.010 (0.083)	
- DOSE*SUBSIDIAIRE	0.060 (0.058)	0.055 (0.053)	
- AMENDEM*DOSE*SUBSID	0.396 (0.318)	0.361 (0.295)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.674 (0.896)	2.202 (0.860)	
- DOSE	0.593 (0.439)	0.489 (0.378)	
- AMENDEMENT*DOSE	0.169 (0.154)	0.139 (0.129)	
- SUBSIDIAIRE	0.096 (0.244)	0.079 (0.224)	
- AMENDEMENT*SUBSIDIAIRE	0.011 (0.085)	0.009 (0.077)	
- DOSE*SUBSIDIAIRE	0.057 (0.055)	0.047 (0.046)	
- AMENDEM*DOSE*SUBSID	0.375 (0.305)	0.308 (0.260)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: C/N2
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	12.373	12.748	13.315	15.806	13.548	13.452	12.692	12.034	11.889	11.941	11.615	11.368
X 12k	11.923	12.330	12.813	12.635	13.090	12.653	12.069	11.739	12.086	12.174	12.126	12.093
X 13k	12.628	12.353	11.827	12.841	12.483	12.516	12.299	12.545	11.929	11.495	11.492	11.818
X 21k	12.013	12.216	12.814	13.006	13.056	12.552	12.921	12.652	11.734	10.982	12.037	12.030
X 22k	12.209	12.733	12.617	13.068	13.187	13.129	11.973	11.975	12.595	13.020	12.035	11.990
X 23k	12.674	12.443	12.931	12.347	12.578	13.214	12.634	12.387	11.447	6.943	12.108	11.242

2 - MOYENNES ET ECARTS RELATIFS

X ... = 12.337

X 1.. = 12.409 (0.59) X 2..= 12.264 (-0.59)

X .1. = 12.533 (1.59) X .2. = 12.428 (0.74) X .3. = 12.049 (-2.33)

X ..1 = 12.382 (0.37) X ..2 = 12.291 (-0.37)

X 11. = 12.732 (3.20) X 12. = 12.311 (-0.21) X 13. = 12.186 (-1.22)
X 21. = 12.334 (-0.02) X 22. = 12.544 (1.68) X 23. = 11.912 (-3.44)

X 1.1 = 12.344 (0.06) X 1.2 = 12.475 (1.12) X 2.1 = 12.420 (0.68) X 2.2 = 12.107 (-1.86)

X .11 = 12.501 (1.33) X .12 = 12.566 (1.86)
X .21 = 12.394 (0.46) X .22 = 12.461 (1.01)
X .31 = 12.253 (-0.68) X .32 = 11.845 (-3.98)

X 111 = 12.572 (1.91) X 121 = 12.351 (0.12) X 131 = 12.110 (-1.84)
X 112 = 12.892 (4.50) X 122 = 12.271 (-0.53) X 132 = 12.261 (-0.61)
X 211 = 12.429 (0.75) X 221 = 12.436 (0.81) X 231 = 12.395 (0.48)
X 212 = 12.240 (-0.79) X 222 = 12.652 (2.56) X 232 = 11.429 (-7.35)

X L1 = 12.387 (0.41) X L2 = 13.002 (5.39) X L3 = 12.955 (5.01)
X L4 = 12.327 (-0.08) X L5 = 11.519 (-6.62) X L6 = 11.830 (-4.11)

X M1 = 12.423 (0.70) X M2 = 12.614 (2.25) X M3 = 12.462 (1.02)
X M4 = 12.393 (0.46) X M5 = 12.182 (-1.26) X M6 = 11.946 (-3.16)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (c=1%)	8.02922E-01 (7.3)	1.50988E+00 (10.0)	8.36080E-01 (7.4)
VR2 (c=2%)	6.57497E-01 (6.6)	6.49491E-01 (6.5)	
VR3 (c=3%)	3.77912E-01 (5.0)	3.79514E-01 (5.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.08191E+00	1.00666E+01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.476 (0.497)	0.253 (0.375)	0.457 (0.487)
- DOSE	1.937 (0.836)	1.030 (0.627)	1.860 (0.825)
- AMENDEMENT*DOSE	0.834 (0.449)	0.444 (0.348)	0.801 (0.466)
- SUBSIDIAIRE	0.229 (0.346)	0.232 (0.348)	
- AMENDEMENT*SUBSIDIAIRE	2.341 (0.865)	2.331 (0.864)	
- DOSE*SUBSIDIAIRE	1.187 (0.678)	1.182 (0.677)	
- AMENDEM*DOSE*SUBSID	1.998 (0.845)	1.990 (0.844)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.664 (0.424)	0.445 (0.485)	
- DOSE	2.700 (0.925)	1.811 (0.828)	
- AMENDEMENT*DOSE	1.163 (0.679)	0.780 (0.468)	
- SUBSIDIAIRE	0.261 (0.383)	0.175 (0.320)	
- AMENDEMENT*SUBSIDIAIRE	1.536 (0.781)	1.030 (0.684)	
- DOSE*SUBSIDIAIRE	0.779 (0.468)	0.523 (0.398)	
- AMENDEM*DOSE*SUBSID	1.311 (0.722)	0.879 (0.424)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: MO2
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	3.800	4.900	4.000	4.200	3.600	3.900	3.400	3.700	3.700	3.500	3.800	3.700
X 12k	3.200	3.700	4.200	3.800	4.000	3.200	3.000	3.300	3.900	3.900	3.600	3.600
X 13k	3.400	4.000	4.000	3.800	3.200	3.400	3.700	3.600	4.100	3.800	3.600	3.800
X 21k	3.300	3.500	3.700	3.600	4.100	3.200	4.000	3.900	3.500	3.100	3.400	4.100
X 22k	3.600	3.800	3.100	3.900	3.600	3.700	3.000	3.200	4.000	3.300	3.600	4.100
X 23k	4.100	3.800	3.800	4.600	2.700	3.100	4.500	3.300	3.000	3.300	3.500	3.100

2 - MOYENNES ET ECARTS RELATIFS

X ... = 3.654

X 1.. = 3.722 (1.86) X 2..= 3.586 (-1.86)

X .1. = 3.733 (2.17) X .2. = 3.596 (-1.60) X .3. = 3.633 (-0.57)

X ..1 = 3.631 (-0.65) X ..2 = 3.678 (0.65)

X 11. = 3.850 (5.36) X 12. = 3.617 (-1.03) X 13. = 3.700 (1.25)
X 21. = 3.617 (-1.03) X 22. = 3.575 (-2.17) X 23. = 3.567 (-2.39)

X 1.1 = 3.678 (0.65) X 1.2 = 3.767 (3.08) X 2.1 = 3.583 (-1.94) X 2.2 = 3.589 (-1.79)

X .11 = 3.692 (1.03) X .12 = 3.775 (3.31)
X .21 = 3.567 (-2.39) X .22 = 3.625 (-0.80)
X .31 = 3.633 (-0.57) X .32 = 3.633 (-0.57)

X 111 = 3.717 (1.71) X 121 = 3.650 (-0.11) X 131 = 3.667 (0.34)
X 112 = 3.983 (9.01) X 122 = 3.583 (-1.94) X 132 = 3.733 (2.17)
X 211 = 3.667 (0.34) X 221 = 3.483 (-4.68) X 231 = 3.600 (-1.48)
X 212 = 3.567 (-2.39) X 222 = 3.667 (0.34) X 232 = 3.533 (-3.31)

X 11 = 3.758 (2.85) X 12 = 3.892 (6.50) X 13 = 3.475 (-4.90)
X 14 = 3.550 (-2.85) X 15 = 3.592 (-1.71) X 16 = 3.658 (0.11)

X m1 = 3.617 (-1.03) X m2 = 3.733 (2.17) X m3 = 3.758 (2.85)
X m4 = 3.683 (0.80) X m5 = 3.525 (-3.53) X m6 = 3.608 (-1.25)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.99917E-01 (12.2)	2.36383E-01 (13.3)	2.27000E-01 (13.0)
VR2 (cv2%)	1.56139E-01 (10.8)	6.51389E-02 (7.0)	
VR3 (cv3%)	1.28806E-01 (9.8)	1.47006E-01 (10.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.03746E+00	3.02663E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.668 (0.794)	1.411 (0.755)	1.469 (0.762)
- DOSE	0.607 (0.442)	0.513 (0.390)	0.534 (0.402)
- AMENDEMENT*DOSE	0.276 (0.235)	0.233 (0.204)	0.243 (0.211)
- SUBSIDIAIRE	0.257 (0.364)	0.616 (0.472)	
- AMENDEMENT*SUBSIDIAIRE	0.243 (0.368)	0.213 (0.347)	
- DOSE*SUBSIDIAIRE	0.085 (0.082)	0.075 (0.072)	
- AMENDEM*DOSE*SUBSID	1.129 (0.660)	0.989 (0.388)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.084 (0.849)	1.910 (0.830)	
- DOSE	0.758 (0.478)	0.695 (0.492)	
- AMENDEMENT*DOSE	0.345 (0.285)	0.316 (0.265)	
- SUBSIDIAIRE	0.251 (0.376)	0.230 (0.361)	
- AMENDEMENT*SUBSIDIAIRE	0.195 (0.335)	0.179 (0.323)	
- DOSE*SUBSIDIAIRE	0.069 (0.067)	0.063 (0.061)	
- AMENDEM*DOSE*SUBSID	0.909 (0.412)	0.833 (0.444)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	8.000	20.000	9.000	14.000	3.000	6.000	8.000	10.000	9.000	6.000	13.000	11.000
X 12k	9.000	14.000	21.000	9.000	8.000	5.000	6.000	7.000	7.000	14.000	8.000	13.000
X 13k	3.000	14.000	14.000	9.000	2.000	6.000	11.000	8.000	9.000	7.000	6.000	9.000
X 21k	8.000	12.000	9.000	6.000	9.000	2.000	17.000	7.000	7.000	9.000	6.000	9.000
X 22k	15.000	9.000	9.000	9.000	3.000	6.000	8.000	8.000	12.000	9.000	5.000	9.000
X 23k	15.000	9.000	11.000	20.000	3.000	3.000	22.000	9.000	5.000	8.000	8.000	8.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 9.167

X 1.. = 9.333 (1.82) X 2..= 9.000 (-1.82)

X .1. = 9.083 (-0.91) X .2. = 9.292 (1.36) X .3. = 9.125 (-0.45)

X ..1 = 9.056 (-1.21) X ..2 = 9.278 (1.21)

X 11. = 9.750 (6.36) X 12. = 10.083 (10.00) X 13. = 8.167 (-10.91)
X 21. = 8.417 (-8.18) X 22. = 8.500 (-7.27) X 23. = 10.083 (10.00)

X 1.1 = 8.556 (-6.67) X 1.2 = 10.111 (10.30) X 2.1 = 9.556 (4.24) X 2.2 = 8.444 (-7.88)

X .11 = 8.833 (-3.64) X .12 = 9.333 (1.82)
X .21 = 9.250 (0.91) X .22 = 9.333 (1.82)
X .31 = 9.083 (-0.91) X .32 = 9.167 (-0.00)

X 111 = 8.333 (-9.09) X 121 = 9.833 (7.27) X 131 = 7.500 (-18.18)
X 112 = 11.167 (21.82) X 122 = 10.333 (12.73) X 132 = 8.833 (-3.64)
X 211 = 9.333 (1.82) X 221 = 8.667 (-5.45) X 231 = 10.667 (16.36)
X 212 = 7.500 (-18.18) X 222 = 8.333 (-9.09) X 232 = 9.500 (3.64)

X 11 = 11.333 (23.64) X 12 = 11.667 (27.27) X 13 = 4.667 (-49.09)
X 14 = 10.083 (10.00) X 15 = 8.500 (-7.27) X 16 = 8.750 (-4.55)

X m1 = 8.833 (-3.64) X m2 = 9.167 (-0.00) X m3 = 9.000 (-1.82)
X m4 = 9.583 (4.55) X m5 = 9.333 (1.82) X m6 = 9.083 (-0.91)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.09533E+01 (36.1)	2.64600E+01 (56.1)	1.34833E+01 (40.1)
VR2 (cv2%)	1.89889E+01 (47.5)	6.98889E+00 (28.8)	
VR3 (cv3%)	1.80956E+01 (46.4)	2.04956E+01 (49.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.43565E+00	2.61667E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.183 (0.324)	0.076 (0.218)	0.148 (0.295)
- DOSE	0.027 (0.025)	0.011 (0.010)	0.022 (0.020)
- AMENDEMENT*DOSE	2.088 (0.857)	0.865 (0.437)	1.697 (0.793)
- SUBSIDIAIRE	0.047 (0.170)	0.127 (0.267)	
- AMENDEMENT*SUBSIDIAIRE	1.768 (0.807)	1.561 (0.779)	
- DOSE*SUBSIDIAIRE	0.019 (0.018)	0.017 (0.016)	
- AMENDEM*DOSE*SUBSID	0.306 (0.257)	0.270 (0.232)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.130 (0.280)	0.093 (0.240)	
- DOSE	0.019 (0.018)	0.014 (0.013)	
- AMENDEMENT*DOSE	1.492 (0.767)	1.062 (0.646)	
- SUBSIDIAIRE	0.058 (0.194)	0.041 (0.166)	
- AMENDEMENT*SUBSIDIAIRE	2.088 (0.849)	1.486 (0.774)	
- DOSE*SUBSIDIAIRE	0.023 (0.022)	0.016 (0.015)	
- AMENDEM*DOSE*SUBSID	0.362 (0.296)	0.257 (0.223)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: PT2
unite : ppm

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	330.000	450.000	340.000	400.000	260.000	280.000	300.000	300.000	310.000	290.000	340.000	370.000
X 12k	300.000	380.000	370.000	300.000	310.000	250.000	240.000	280.000	340.000	390.000	310.000	320.000
X 13k	280.000	360.000	410.000	340.000	240.000	260.000	290.000	270.000	290.000	370.000	350.000	320.000
X 21k	280.000	320.000	310.000	320.000	380.000	250.000	350.000	320.000	280.000	290.000	300.000	370.000
X 22k	340.000	310.000	270.000	320.000	270.000	290.000	250.000	270.000	350.000	290.000	350.000	340.000
X 23k	370.000	330.000	340.000	420.000	230.000	250.000	390.000	260.000	250.000	270.000	290.000	290.000

2 - MOYENNES ET ECARTS RELATIFS

X ... = 314.583

X 1.. = 320.556 (1.90) X 2..= 308.611 (-1.90)

X .1. = 322.500 (2.52) X .2. = 310.000 (-1.46) X .3. = 311.250 (-1.06)

X ..1 = 311.389 (-1.02) X ..2 = 317.778 (1.02)

X 11. = 330.833 (5.17) X 12. = 315.833 (0.40) X 13. = 315.000 (0.13)
X 21. = 314.167 (-0.13) X 22. = 304.167 (-3.31) X 23. = 307.500 (-2.25)

X 1.1 = 311.667 (-0.93) X 1.2 = 329.444 (4.72) X 2.1 = 311.111 (-1.10) X 2.2 = 306.111 (-2.69)

X .11 = 315.000 (0.13) X .12 = 330.000 (4.90)
X .21 = 308.333 (-1.99) X .22 = 311.667 (-0.93)
X .31 = 310.833 (-1.19) X .32 = 311.667 (-0.93)

X 111 = 313.333 (-0.40) X 121 = 311.667 (-0.93) X 131 = 310.000 (-1.46)
X 112 = 348.333 (10.73) X 122 = 320.000 (1.72) X 132 = 320.000 (1.72)
X 211 = 316.667 (0.66) X 221 = 305.000 (-3.05) X 231 = 311.667 (-0.93)
X 212 = 311.667 (-0.93) X 222 = 303.333 (-3.58) X 232 = 303.333 (-3.58)

X 11 = 337.500 (7.28) X 12 = 345.000 (9.67) X 13 = 272.500 (-13.38)
X 14 = 293.333 (-6.75) X 15 = 310.000 (-1.46) X 16 = 329.167 (4.64)

X m1 = 320.000 (1.72) X m2 = 332.500 (5.70) X m3 = 320.833 (1.99)
X m4 = 309.167 (-1.72) X m5 = 297.500 (-5.43) X m6 = 307.500 (-2.25)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.13050E+03 (14.7)	3.64050E+03 (19.2)	2.20667E+03 (14.9)
VR2 (cv2%)	1.58472E+03 (12.7)	6.34722E+02 (8.0)	
VR3 (cv3%)	1.83006E+03 (13.6)	2.02006E+03 (14.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.16880E-01	5.03094E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.205 (0.718)	0.705 (0.414)	1.164 (0.706)
- DOSE	0.534 (0.402)	0.312 (0.261)	0.515 (0.391)
- AMENDEMENT*DOSE	0.059 (0.058)	0.035 (0.034)	0.057 (0.056)
- SUBSIDIAIRE	0.464 (0.470)	1.158 (0.668)	
- AMENDEMENT*SUBSIDIAIRE	1.276 (0.731)	1.156 (0.707)	
- DOSE*SUBSIDIAIRE	0.187 (0.169)	0.170 (0.154)	
- AMENDEM*DOSE*SUBSID	0.197 (0.176)	0.178 (0.161)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.334 (0.748)	1.015 (0.680)	
- DOSE	0.591 (0.437)	0.450 (0.354)	
- AMENDEMENT*DOSE	0.066 (0.064)	0.050 (0.049)	
- SUBSIDIAIRE	0.382 (0.453)	0.290 (0.401)	
- AMENDEMENT*SUBSIDIAIRE	1.212 (0.724)	0.923 (0.343)	
- DOSE*SUBSIDIAIRE	0.178 (0.162)	0.136 (0.126)	
- AMENDEM*DOSE*SUBSID	0.187 (0.169)	0.142 (0.132)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: K2
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.280	0.450	0.260	0.280	0.160	0.130	0.150	0.150	0.230	0.210	0.270	0.280
X 12k	0.170	0.210	0.220	0.160	0.180	0.140	0.100	0.140	0.140	0.200	0.210	0.280
X 13k	0.150	0.200	0.230	0.210	0.110	0.150	0.150	0.130	0.230	0.230	0.210	0.250
X 21k	0.170	0.210	0.200	0.210	0.190	0.110	0.150	0.150	0.180	0.190	0.200	0.230
X 22k	0.180	0.200	0.130	0.210	0.130	0.150	0.130	0.130	0.230	0.150	0.180	0.240
X 23k	0.240	0.190	0.250	0.320	0.110	0.110	0.400	0.220	0.160	0.180	0.180	0.270

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.196

X 1.. = 0.201 (2.62) X 2..= 0.191 (-2.62)

X .1. = 0.210 (7.01) X .2. = 0.175 (-10.62) X .3. = 0.203 (3.61)

X ..1 = 0.191 (-2.90) X ..2 = 0.202 (2.90)

X 11. = 0.238 (21.02) X 12. = 0.179 (-8.70) X 13. = 0.188 (-4.46)
X 21. = 0.182 (-7.01) X 22. = 0.172 (-12.53) X 23. = 0.219 (11.68)

X 1.1 = 0.192 (-2.34) X 1.2 = 0.211 (7.57) X 2.1 = 0.189 (-3.47) X 2.2 = 0.193 (-1.77)

X .11 = 0.203 (3.61) X .12 = 0.217 (10.40)
X .21 = 0.167 (-15.07) X .22 = 0.184 (-6.16)
X .31 = 0.202 (2.76) X .32 = 0.205 (4.46)

X 111 = 0.225 (14.65) X 121 = 0.170 (-13.38) X 131 = 0.180 (-8.28)
X 112 = 0.250 (27.39) X 122 = 0.188 (-4.03) X 132 = 0.195 (-0.64)
X 211 = 0.182 (-7.43) X 221 = 0.163 (-16.77) X 231 = 0.223 (13.80)
X 212 = 0.183 (-6.58) X 222 = 0.180 (-8.28) X 232 = 0.215 (9.55)

X 11 = 0.221 (12.53) X 12 = 0.223 (13.80) X 13 = 0.139 (-29.09)
X 14 = 0.167 (-15.07) X 15 = 0.194 (-1.06) X 16 = 0.233 (18.90)

X ■1 = 0.203 (3.61) X ■2 = 0.194 (-1.06) X ■3 = 0.215 (9.55)
X ■4 = 0.203 (3.61) X ■5 = 0.178 (-9.13) X ■6 = 0.183 (-6.58)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.89050E-03 (31.8)	6.72583E-03 (41.8)	4.29667E-03 (33.4)
VR2 (cv2%)	2.97806E-03 (27.8)	8.61389E-04 (15.0)	
VR3 (cv3%)	1.79406E-03 (21.6)	2.21739E-03 (24.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.21508E+00	1.01215E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.489 (0.498)	0.283 (0.394)	0.443 (0.480)
- DOSE	2.077 (0.855)	1.201 (0.682)	1.880 (0.828)
- AMENDEMENT*DOSE	2.905 (0.928)	1.680 (0.795)	2.630 (0.905)
- SUBSIDIAIRE	0.784 (0.420)	2.710 (0.841)	
- AMENDEMENT*SUBSIDIAIRE	0.651 (0.433)	0.527 (0.481)	
- DOSE*SUBSIDIAIRE	0.177 (0.161)	0.143 (0.133)	
- AMENDEM*DOSE*SUBSID	0.131 (0.122)	0.106 (0.101)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.691 (0.415)	0.489 (0.494)	
- DOSE	2.937 (0.939)	2.079 (0.866)	
- AMENDEMENT*DOSE	4.108 (0.978)	2.909 (0.938)	
- SUBSIDIAIRE	0.849 (0.364)	0.601 (0.448)	
- AMENDEMENT*SUBSIDIAIRE	0.425 (0.475)	0.301 (0.408)	
- DOSE*SUBSIDIAIRE	0.116 (0.109)	0.082 (0.079)	
- AMENDEM*DOSE*SUBSID	0.085 (0.082)	0.060 (0.059)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: NA2
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.370	0.840	0.420	0.340	0.400	0.350	0.350	0.310	0.340	0.380	0.320	0.340
X 12k	0.290	0.270	0.350	0.390	0.330	0.330	0.320	0.300	0.260	0.290	0.330	0.370
X 13k	0.290	0.350	0.310	0.430	0.320	0.410	0.320	0.310	0.290	0.290	0.340	0.370
X 21k	0.240	0.290	0.260	0.300	0.340	0.350	0.380	0.220	0.320	0.440	0.250	0.330
X 22k	0.260	0.310	0.340	0.380	0.380	0.360	0.330	0.350	0.360	0.360	0.270	0.320
X 23k	0.360	0.380	0.260	0.240	0.440	0.350	0.270	0.260	0.360	0.350	0.280	0.260

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.336

X 1.. = 0.351 (4.43) X 2..= 0.321 (-4.43)

X .1. = 0.353 (5.25) X .2. = 0.327 (-2.57) X .3. = 0.327 (-2.69)

X ..1 = 0.324 (-3.60) X ..2 = 0.348 (3.60)

X 11. = 0.397 (18.16) X 12. = 0.319 (-4.92) X 13. = 0.336 (0.04)
X 21. = 0.310 (-7.65) X 22. = 0.335 (-0.21) X 23. = 0.318 (-5.42)

X 1.1 = 0.331 (-1.53) X 1.2 = 0.371 (10.38) X 2.1 = 0.317 (-5.67) X 2.2 = 0.325 (-3.19)

X .11 = 0.333 (-0.95) X .12 = 0.374 (11.46)
X .21 = 0.318 (-5.17) X .22 = 0.336 (0.04)
X .31 = 0.320 (-4.68) X .32 = 0.333 (-0.70)

X 111 = 0.367 (9.23) X 121 = 0.313 (-6.66) X 131 = 0.312 (-7.16)
X 112 = 0.427 (27.10) X 122 = 0.325 (-3.19) X 132 = 0.360 (7.24)
X 211 = 0.298 (-11.13) X 221 = 0.323 (-3.68) X 231 = 0.328 (-2.19)
X 212 = 0.322 (-4.18) X 222 = 0.347 (3.27) X 232 = 0.307 (-8.65)

X 11 = 0.354 (5.50) X 12 = 0.335 (-0.21) X 13 = 0.363 (8.23)
X 14 = 0.310 (-7.65) X 15 = 0.337 (0.29) X 16 = 0.315 (-6.16)

X m1 = 0.388 (15.68) X m2 = 0.344 (2.52) X m3 = 0.298 (-11.38)
X m4 = 0.318 (-5.17) X m5 = 0.333 (-0.70) X m6 = 0.333 (-0.95)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	7.15939E-03 (25.2)	5.99606E-03 (23.1)	6.17806E-03 (23.4)
VR2 (cv2%)	6.91250E-03 (24.8)	4.24917E-03 (19.4)	
VR3 (cv3%)	4.35983E-03 (19.7)	4.89250E-03 (20.8)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.41887E+00	3.34336E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.221 (0.855)	2.652 (0.888)	2.574 (0.879)
- DOSE	0.782 (0.472)	0.934 (0.409)	0.907 (0.419)
- AMENDEMENT*DOSE	2.283 (0.879)	2.726 (0.917)	2.645 (0.906)
- SUBSIDIAIRE	1.521 (0.728)	2.474 (0.825)	
- AMENDEMENT*SUBSIDIAIRE	1.035 (0.680)	0.922 (0.348)	
- DOSE*SUBSIDIAIRE	0.322 (0.268)	0.287 (0.243)	
- AMENDEM*DOSE*SUBSID	0.580 (0.428)	0.517 (0.392)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.773 (0.902)	3.018 (0.915)	
- DOSE	0.977 (0.386)	1.063 (0.646)	
- AMENDEMENT*DOSE	2.850 (0.934)	3.101 (0.948)	
- SUBSIDIAIRE	1.833 (0.821)	1.995 (0.839)	
- AMENDEMENT*SUBSIDIAIRE	0.787 (0.383)	0.856 (0.362)	
- DOSE*SUBSIDIAIRE	0.245 (0.213)	0.266 (0.229)	
- AMENDEM*DOSE*SUBSID	0.441 (0.349)	0.480 (0.373)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: CA2
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.000	6.500	4.800	4.100	5.000	4.900	4.300	4.800	4.100	3.600	4.000	3.400
X 12k	4.300	4.700	5.300	5.200	4.700	4.500	4.200	4.200	4.500	4.100	3.700	3.700
X 13k	5.700	4.300	4.800	4.700	4.500	4.700	4.700	4.600	4.400	4.300	3.700	3.600
X 21k	4.200	4.400	4.500	4.700	4.900	4.900	4.500	4.500	4.000	4.100	3.500	3.500
X 22k	4.300	4.600	5.100	4.800	4.600	4.600	4.000	4.100	4.400	4.000	3.400	3.900
X 23k	4.600	4.700	4.700	4.500	4.900	4.900	4.500	3.600	4.600	3.900	3.500	3.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 4.407

X 1.. = 4.489 (1.86) X 2..= 4.325 (-1.86)

X .1. = 4.425 (0.41) X .2. = 4.371 (-0.82) X .3. = 4.425 (0.41)

X ..1 = 4.442 (0.79) X ..2 = 4.372 (-0.79)

X 11. = 4.542 (3.06) X 12. = 4.425 (0.41) X 13. = 4.500 (2.11)
X 21. = 4.308 (-2.24) X 22. = 4.317 (-2.05) X 23. = 4.350 (-1.29)

X 1.1 = 4.539 (2.99) X 1.2 = 4.439 (0.72) X 2.1 = 4.344 (-1.42) X 2.2 = 4.306 (-2.30)

X .11 = 4.400 (-0.16) X .12 = 4.450 (0.98)
X .21 = 4.375 (-0.72) X .22 = 4.367 (-0.91)
X .31 = 4.550 (3.25) X .32 = 4.300 (-2.43)

X 111 = 4.533 (2.87) X 121 = 4.450 (0.98) X 131 = 4.633 (5.14)
X 112 = 4.550 (3.25) X 122 = 4.400 (-0.16) X 132 = 4.367 (-0.91)
X 211 = 4.267 (-3.18) X 221 = 4.300 (-2.43) X 231 = 4.467 (1.36)
X 212 = 4.350 (-1.29) X 222 = 4.333 (-1.67) X 232 = 4.233 (-3.94)

X 11 = 4.775 (8.35) X 12 = 4.767 (8.16) X 13 = 4.758 (7.97)
X 14 = 4.333 (-1.67) X 15 = 4.167 (-5.45) X 16 = 3.642 (-17.37)

X m1 = 4.550 (3.25) X m2 = 4.333 (-1.67) X m3 = 4.350 (-1.29)
X m4 = 4.283 (-2.80) X m5 = 4.425 (0.41) X m6 = 4.500 (2.11)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.81072E-01 (9.7)	6.53272E-01 (18.3)	1.94306E-01 (10.0)
VR2 (cv2%)	9.64722E-02 (7.0)	2.20806E-01 (10.7)	
VR3 (cv3%)	1.27339E-01 (8.1)	1.02472E-01 (7.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.05036E+00	1.74972E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.670 (0.889)	0.740 (0.402)	2.488 (0.873)
- DOSE	0.130 (0.121)	0.036 (0.035)	0.121 (0.114)
- AMENDEMENT*DOSE	0.134 (0.125)	0.037 (0.036)	0.125 (0.117)
- SUBSIDIAIRE	0.900 (0.389)	0.393 (0.438)	
- AMENDEMENT*SUBSIDIAIRE	0.132 (0.280)	0.164 (0.309)	
- DOSE*SUBSIDIAIRE	1.192 (0.680)	1.481 (0.754)	
- AMENDEM*DOSE*SUBSID	0.008 (0.007)	0.009 (0.009)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.317 (0.929)	1.445 (0.767)	
- DOSE	0.161 (0.148)	0.070 (0.068)	
- AMENDEMENT*DOSE	0.167 (0.152)	0.073 (0.070)	
- SUBSIDIAIRE	0.596 (0.450)	0.259 (0.381)	
- AMENDEMENT*SUBSIDIAIRE	0.115 (0.265)	0.050 (0.182)	
- DOSE*SUBSIDIAIRE	1.042 (0.638)	0.454 (0.357)	
- AMENDEM*DOSE*SUBSID	0.007 (0.006)	0.003 (0.003)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: MG2
unite : meq/100g

1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	43.600	44.600	45.800	45.300	46.600	45.000	35.500	38.200	40.200	42.200	45.900	45.000
X 12k	48.500	47.500	44.000	46.400	42.400	44.000	45.400	43.000	33.900	34.800	42.700	44.700
X 13k	48.300	46.200	49.100	47.800	42.500	43.000	42.500	42.200	37.100	34.300	37.400	43.500
X 21k	48.200	49.800	45.000	47.000	44.700	48.300	33.600	37.600	44.900	45.500	34.100	34.800
X 22k	47.600	47.200	45.200	46.200	46.400	42.900	41.200	41.800	36.200	37.900	33.400	42.400
X 23k	49.200	50.300	44.200	45.800	49.500	49.500	39.900	41.900	46.400	47.100	41.600	44.700

2 - MOYENNES ET ECARTS RELATIFS

X ... = 43.349

X 1.. = 43.031 (-0.73) X 2..= 43.667 (0.73)

X .1. = 42.975 (-0.86) X .2. = 42.737 (-1.41) X .3. = 44.333 (2.27)

X ..1 = 42.853 (-1.14) X ..2 = 43.844 (1.14)

X 11. = 43.158 (-0.44) X 12. = 43.108 (-0.55) X 13. = 42.825 (-1.21)
X 21. = 42.792 (-1.28) X 22. = 42.367 (-2.27) X 23. = 45.842 (5.75)

X 1.1 = 42.856 (-1.14) X 1.2 = 43.206 (-0.33) X 2.1 = 42.850 (-1.15) X 2.2 = 44.483 (2.62)

X .11 = 42.342 (-2.32) X .12 = 43.608 (0.60)
X .21 = 42.242 (-2.55) X .22 = 43.233 (-0.27)
X .31 = 43.975 (1.45) X .32 = 44.692 (3.10)

X 111 = 42.933 (-0.96) X 121 = 42.817 (-1.23) X 131 = 42.817 (-1.23)
X 112 = 43.383 (0.08) X 122 = 43.400 (0.12) X 132 = 42.833 (-1.19)
X 211 = 41.750 (-3.69) X 221 = 41.667 (-3.88) X 231 = 45.133 (4.12)
X 212 = 43.833 (1.12) X 222 = 43.067 (-0.65) X 232 = 46.550 (7.39)

X 11 = 47.583 (9.77) X 12 = 45.983 (6.08) X 13 = 45.400 (4.73)
X 14 = 40.233 (-7.19) X 15 = 40.042 (-7.63) X 16 = 40.850 (-5.76)

X .1 = 42.958 (-0.90) X .2 = 43.017 (-0.77) X .3 = 42.383 (-2.23)
X .4 = 44.317 (2.23) X .5 = 43.425 (0.18) X .6 = 43.992 (1.48)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.26612E+01 (11.0)	4.83009E+01 (16.0)	2.67961E+01 (11.9)
VR2 (cv2%)	4.46992E+00 (4.9)	1.56558E+00 (2.9)	
VR3 (cv3%)	2.82778E+00 (3.9)	3.40865E+00 (4.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	2.26479E+01	4.03900E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.321 (0.418)	0.151 (0.297)	0.272 (0.387)
- DOSE	0.785 (0.471)	0.368 (0.300)	0.664 (0.472)
- AMENDEMENT*DOSE	1.135 (0.662)	0.532 (0.401)	0.960 (0.402)
- SUBSIDIAIRE	3.960 (0.898)	11.306 (0.980)	
- AMENDEMENT*SUBSIDIAIRE	2.621 (0.886)	2.174 (0.851)	
- DOSE*SUBSIDIAIRE	0.160 (0.147)	0.133 (0.124)	
- AMENDEM*DOSE*SUBSID	0.094 (0.090)	0.078 (0.075)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.667 (0.423)	0.344 (0.433)	
- DOSE	1.629 (0.795)	0.840 (0.441)	
- AMENDEMENT*DOSE	2.353 (0.896)	1.214 (0.695)	
- SUBSIDIAIRE	1.620 (0.794)	0.836 (0.368)	
- AMENDEMENT*SUBSIDIAIRE	0.678 (0.419)	0.350 (0.436)	
- DOSE*SUBSIDIAIRE	0.042 (0.040)	0.021 (0.020)	
- AMENDEM*DOSE*SUBSID	0.024 (0.023)	0.013 (0.012)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: S2
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	49.250	52.390	51.280	50.020	52.160	50.380	40.300	43.460	44.870	46.390	50.490	49.020
X 12k	53.260	52.680	49.870	52.150	47.610	48.970	50.020	47.640	38.800	39.390	46.940	49.050
X 13k	54.440	51.050	54.440	53.140	47.430	48.260	47.670	47.240	42.020	39.120	41.650	47.720
X 21k	52.810	54.700	49.960	52.210	50.130	53.660	38.630	42.470	49.400	50.230	38.050	38.860
X 22k	52.340	52.310	50.770	51.590	51.510	48.010	45.660	46.380	41.190	42.410	37.250	46.860
X 23k	54.400	55.570	49.410	50.860	54.950	54.860	45.070	45.980	51.520	51.530	45.560	49.030

2 - MOYENNES ET ECARTS RELATIFS

X ... = 48.287

X 1.. = 48.071 (-0.45) X 2..= 48.504 (0.45)

X .1. = 47.963 (-0.67) X .2. = 47.611 (-1.40) X .3. = 49.288 (2.07)

X ..1 = 47.809 (-0.99) X ..2 = 48.766 (0.99)

X 11. = 48.334 (0.10) X 12. = 48.032 (-0.53) X 13. = 47.848 (-0.91)
X 21. = 47.592 (-1.44) X 22. = 47.190 (-2.27) X 23. = 50.728 (5.05)

X 1.1 = 47.917 (-0.77) X 1.2 = 48.226 (-0.13) X 2.1 = 47.701 (-1.22) X 2.2 = 49.307 (2.11)

X .11 = 47.277 (-2.09) X .12 = 48.649 (0.75)
X .21 = 47.102 (-2.46) X .22 = 48.120 (-0.35)
X .31 = 49.047 (1.57) X .32 = 49.530 (2.57)

X 111 = 48.058 (-0.47) X 121 = 47.750 (-1.11) X 131 = 47.942 (-0.72)
X 112 = 48.610 (0.67) X 122 = 48.313 (0.05) X 132 = 47.755 (-1.10)
X 211 = 46.497 (-3.71) X 221 = 46.453 (-3.80) X 231 = 50.152 (3.86)
X 212 = 48.688 (0.83) X 222 = 47.927 (-0.75) X 232 = 51.305 (6.25)

X 11 = 52.933 (9.62) X 12 = 51.308 (6.26) X 13 = 50.661 (4.92)
X 14 = 45.043 (-6.72) X 15 = 44.739 (-7.35) X 16 = 45.040 (-6.73)

X m1 = 48.100 (-0.39) X m2 = 47.888 (-0.83) X m3 = 47.246 (-2.16)
X m4 = 49.122 (1.73) X m5 = 48.362 (0.15) X m6 = 49.007 (1.49)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.20146E+01 (9.7)	5.44166E+01 (15.3)	2.60187E+01 (10.6)
VR2 (cv2%)	4.74401E+00 (4.5)	1.64983E+00 (2.7)	
VR3 (cv3%)	3.31688E+00 (3.8)	3.93572E+00 (4.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.91590E+01	4.01950E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.153 (0.299)	0.062 (0.199)	0.129 (0.277)
- DOSE	0.853 (0.441)	0.345 (0.284)	0.722 (0.500)
- AMENDEMENT*DOSE	1.225 (0.689)	0.496 (0.380)	1.037 (0.626)
- SUBSIDIAIRE	3.481 (0.880)	10.008 (0.975)	
- AMENDEMENT*SUBSIDIAIRE	2.281 (0.860)	1.922 (0.825)	
- DOSE*SUBSIDIAIRE	0.362 (0.295)	0.305 (0.256)	
- AMENDEM*DOSE*SUBSID	0.061 (0.059)	0.051 (0.050)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.307 (0.412)	0.141 (0.290)	
- DOSE	1.716 (0.812)	0.786 (0.465)	
- AMENDEMENT*DOSE	2.466 (0.907)	1.129 (0.668)	
- SUBSIDIAIRE	1.510 (0.777)	0.691 (0.415)	
- AMENDEMENT*SUBSIDIAIRE	0.692 (0.415)	0.317 (0.417)	
- DOSE*SUBSIDIAIRE	0.110 (0.104)	0.050 (0.049)	
- AMENDEM*DOSE*SUBSID	0.018 (0.017)	0.008 (0.008)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: T2
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	58.600	60.400	57.200	57.600	53.800	55.800	45.900	50.400	50.800	50.900	53.100	52.600
X 12k	57.500	59.800	54.900	55.000	52.000	53.000	52.900	51.800	44.500	44.700	52.700	51.200
X 13k	55.900	57.300	56.800	56.400	50.700	51.400	53.000	51.900	49.600	43.900	48.900	52.400
X 21k	56.400	58.700	56.500	55.200	54.200	54.900	43.700	46.200	53.400	51.200	44.100	46.300
X 22k	55.500	57.800	54.400	55.200	54.500	52.500	49.000	50.100	47.100	48.000	45.000	53.500
X 23k	59.900	60.200	54.400	55.600	56.100	57.100	50.400	50.400	54.100	51.900	50.900	52.300

2 - MOYENNES ET ECARTS RELATIFS

X ... = 52.806

X 1.. = 52.925 (0.23) X 2..= 52.686 (-0.23)

X .1. = 52.829 (0.04) X .2. = 52.192 (-1.16) X .3. = 53.396 (1.12)

X ..1 = 52.456 (-0.66) X ..2 = 53.156 (0.66)

X 11. = 53.925 (2.12) X 12. = 52.500 (-0.58) X 13. = 52.350 (-0.86)
X 21. = 51.733 (-2.03) X 22. = 51.883 (-1.75) X 23. = 54.442 (3.10)

X 1.1 = 52.711 (-0.18) X 1.2 = 53.139 (0.63) X 2.1 = 52.200 (-1.15) X 2.2 = 53.172 (0.69)

X .11 = 52.308 (-0.94) X .12 = 53.350 (1.03)
X .21 = 51.667 (-2.16) X .22 = 52.717 (-0.17)
X .31 = 53.392 (1.11) X .32 = 53.400 (1.13)

X 111 = 53.233 (0.81) X 121 = 52.417 (-0.74) X 131 = 52.483 (-0.61)
X 112 = 54.617 (3.43) X 122 = 52.583 (-0.42) X 132 = 52.217 (-1.12)
X 211 = 51.383 (-2.69) X 221 = 50.917 (-3.58) X 231 = 54.300 (2.83)
X 212 = 52.083 (-1.37) X 222 = 52.850 (0.08) X 232 = 54.583 (3.37)

X 11 = 58.167 (10.15) X 12 = 55.767 (5.61) X 13 = 53.833 (1.95)
X 14 = 49.642 (-5.99) X 15 = 49.175 (-6.88) X 16 = 50.250 (-4.84)

X m1 = 52.967 (0.31) X m2 = 52.800 (-0.01) X m3 = 52.617 (-0.36)
X m4 = 53.550 (1.41) X m5 = 52.450 (-0.67) X m6 = 52.450 (-0.67)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.05948E+01 (6.2)	4.29560E+01 (12.4)	1.27222E+01 (6.8)
VR2 (cv2%)	5.22500E+00 (4.3)	6.97333E-01 (1.6)	
VR3 (cv3%)	2.26053E+00 (2.8)	3.16607E+00 (3.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.22526E+01	4.26536E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.097 (0.244)	0.024 (0.127)	0.081 (0.224)
- DOSE	0.822 (0.455)	0.203 (0.181)	0.685 (0.482)
- AMENDEMENT*DOSE	2.658 (0.912)	0.656 (0.468)	2.214 (0.866)
- SUBSIDIAIRE	1.688 (0.750)	12.648 (0.983)	
- AMENDEMENT*SUBSIDIAIRE	0.590 (0.456)	0.421 (0.471)	
- DOSE*SUBSIDIAIRE	0.952 (0.402)	0.680 (0.480)	
- AMENDEM*DOSE*SUBSID	0.996 (0.385)	0.711 (0.495)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.174 (0.319)	0.055 (0.189)	
- DOSE	1.479 (0.764)	0.462 (0.362)	
- AMENDEMENT*DOSE	4.781 (0.988)	1.495 (0.767)	
- SUBSIDIAIRE	1.497 (0.775)	0.468 (0.496)	
- AMENDEMENT*SUBSIDIAIRE	0.226 (0.359)	0.071 (0.213)	
- DOSE*SUBSIDIAIRE	0.365 (0.299)	0.114 (0.108)	
- AMENDEM*DOSE*SUBSID	0.382 (0.310)	0.120 (0.113)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: S/T2
unite :

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.840	0.867	0.897	0.868	0.970	0.903	0.878	0.862	0.883	0.911	0.951	0.932
X 12k	0.926	0.881	0.908	0.948	0.916	0.924	0.946	0.920	0.872	0.881	0.891	0.958
X 13k	0.974	0.891	0.958	0.942	0.936	0.939	0.899	0.910	0.847	0.891	0.852	0.911
X 21k	0.936	0.932	0.884	0.946	0.925	0.977	0.884	0.919	0.925	0.981	0.863	0.839
X 22k	0.943	0.905	0.933	0.935	0.945	0.914	0.932	0.926	0.875	0.884	0.828	0.876
X 23k	0.908	0.923	0.908	0.915	0.980	0.961	0.894	0.912	0.952	0.993	0.895	0.937

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.913

X 1.. = 0.908 (-0.61) X 2..= 0.919 (0.61)

X .1. = 0.907 (-0.68) X .2. = 0.911 (-0.26) X .3. = 0.922 (0.94)

X ..1 = 0.910 (-0.40) X ..2 = 0.917 (0.40)

X 11. = 0.897 (-1.81) X 12. = 0.914 (0.08) X 13. = 0.913 (-0.10)
X 21. = 0.918 (0.46) X 22. = 0.908 (-0.61) X 23. = 0.932 (1.98)

X 1.1 = 0.908 (-0.60) X 1.2 = 0.908 (-0.62) X 2.1 = 0.912 (-0.19) X 2.2 = 0.926 (1.42)

X .11 = 0.903 (-1.15) X .12 = 0.912 (-0.21)
X .21 = 0.909 (-0.43) X .22 = 0.913 (-0.09)
X .31 = 0.917 (0.39) X .32 = 0.927 (1.49)

X 111 = 0.903 (-1.13) X 121 = 0.910 (-0.41) X 131 = 0.911 (-0.27)
X 112 = 0.891 (-2.49) X 122 = 0.919 (0.57) X 132 = 0.914 (0.06)
X 211 = 0.903 (-1.16) X 221 = 0.909 (-0.46) X 231 = 0.923 (1.04)
X 212 = 0.932 (2.08) X 222 = 0.907 (-0.76) X 232 = 0.940 (2.93)

X 11 = 0.911 (-0.31) X 12 = 0.920 (0.74) X 13 = 0.941 (2.98)
X 14 = 0.907 (-0.72) X 15 = 0.908 (-0.60) X 16 = 0.894 (-2.09)

X a1 = 0.906 (-0.80) X a2 = 0.906 (-0.82) X a3 = 0.897 (-1.86)
X a4 = 0.917 (0.39) X a5 = 0.922 (0.88) X a6 = 0.934 (2.21)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.95818E-03 (4.8)	2.12891E-03 (5.1)	1.91983E-03 (4.8)
VR2 (cv2%)	1.29478E-03 (3.9)	3.12790E-04 (1.9)	
VR3 (cv3%)	5.65076E-04 (2.6)	7.61474E-04 (3.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.09306E+00	8.81229E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.148 (0.706)	1.056 (0.685)	1.171 (0.708)
- DOSE	0.720 (0.499)	0.663 (0.471)	0.735 (0.494)
- AMENDEMENT*DOSE	0.703 (0.491)	0.647 (0.463)	0.718 (0.496)
- SUBSIDIAIRE	0.735 (0.434)	3.044 (0.860)	
- AMENDEMENT*SUBSIDIAIRE	1.759 (0.806)	1.305 (0.737)	
- DOSE*SUBSIDIAIRE	0.145 (0.134)	0.107 (0.102)	
- AMENDEM*DOSE*SUBSID	1.907 (0.832)	1.415 (0.739)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	1.881 (0.827)	1.780 (0.815)	
- DOSE	1.180 (0.684)	1.116 (0.664)	
- AMENDEMENT*DOSE	1.153 (0.676)	1.090 (0.655)	
- SUBSIDIAIRE	0.797 (0.380)	0.754 (0.394)	
- AMENDEMENT*SUBSIDIAIRE	0.831 (0.369)	0.786 (0.383)	
- DOSE*SUBSIDIAIRE	0.068 (0.066)	0.065 (0.063)	
- AMENDEM*DOSE*SUBSID	0.901 (0.415)	0.853 (0.436)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: CA/MG2
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.115	0.146	0.105	0.091	0.107	0.109	0.121	0.126	0.102	0.085	0.087	0.076
X 12k	0.089	0.099	0.120	0.112	0.111	0.102	0.093	0.098	0.133	0.118	0.087	0.083
X 13k	0.118	0.093	0.098	0.098	0.106	0.109	0.111	0.109	0.119	0.125	0.099	0.083
X 21k	0.087	0.088	0.100	0.100	0.110	0.101	0.134	0.120	0.089	0.090	0.103	0.101
X 22k	0.090	0.097	0.113	0.104	0.099	0.107	0.097	0.098	0.122	0.106	0.102	0.092
X 23k	0.093	0.093	0.106	0.098	0.099	0.099	0.113	0.086	0.099	0.083	0.084	0.085

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.102

X 1.. = 0.105 (2.59) X 2..= 0.100 (-2.59)

X .1. = 0.104 (1.43) X .2. = 0.103 (0.58) X .3. = 0.100 (-2.01)

X ..1 = 0.104 (2.02) X ..2 = 0.100 (-2.02)

X 11. = 0.106 (3.31) X 12. = 0.104 (1.25) X 13. = 0.106 (3.22)
X 21. = 0.102 (-0.45) X 22. = 0.102 (-0.09) X 23. = 0.095 (-7.23)

X 1.1 = 0.107 (4.16) X 1.2 = 0.103 (1.03) X 2.1 = 0.102 (-0.11) X 2.2 = 0.097 (-5.07)

X .11 = 0.105 (2.55) X .12 = 0.103 (0.30)
X .21 = 0.105 (2.16) X .22 = 0.101 (-1.01)
X .31 = 0.104 (1.35) X .32 = 0.097 (-5.36)

X 111 = 0.106 (3.75) X 121 = 0.105 (2.90) X 131 = 0.108 (5.82)
X 112 = 0.105 (2.87) X 122 = 0.102 (-0.41) X 132 = 0.103 (0.62)
X 211 = 0.104 (1.36) X 221 = 0.104 (1.42) X 231 = 0.099 (-3.12)
X 212 = 0.100 (-2.26) X 222 = 0.101 (-1.60) X 232 = 0.091 (-11.34)

X 11 = 0.101 (-1.53) X 12 = 0.104 (1.40) X 13 = 0.105 (2.59)
X 14 = 0.109 (6.19) X 15 = 0.106 (3.42) X 16 = 0.090 (-12.06)

X m1 = 0.106 (3.82) X m2 = 0.102 (-0.60) X m3 = 0.103 (0.99)
X m4 = 0.097 (-5.32) X m5 = 0.103 (0.21) X m6 = 0.103 (0.90)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.91538E-04 (16.7)	3.72654E-04 (18.9)	3.36101E-04 (17.9)
VR2 (cv2%)	7.42682E-05 (8.4)	1.23707E-04 (10.9)	
VR3 (cv3%)	6.78582E-05 (8.0)	5.79704E-05 (7.4)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.20989E+01	1.76651E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.737 (0.803)	1.359 (0.746)	1.506 (0.768)
- DOSE	0.276 (0.235)	0.216 (0.191)	0.239 (0.209)
- AMENDEMENT*DOSE	0.480 (0.370)	0.375 (0.304)	0.416 (0.330)
- SUBSIDIAIRE	4.146 (0.904)	2.489 (0.826)	
- AMENDEMENT*SUBSIDIAIRE	0.231 (0.360)	0.271 (0.387)	
- DOSE*SUBSIDIAIRE	0.514 (0.391)	0.602 (0.440)	
- AMENDEM*DOSE*SUBSID	0.078 (0.075)	0.091 (0.087)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.205 (0.924)	2.659 (0.895)	
- DOSE	0.509 (0.391)	0.423 (0.337)	
- AMENDEMENT*DOSE	0.885 (0.422)	0.734 (0.489)	
- SUBSIDIAIRE	1.949 (0.835)	1.617 (0.793)	
- AMENDEMENT*SUBSIDIAIRE	0.099 (0.248)	0.082 (0.228)	
- DOSE*SUBSIDIAIRE	0.221 (0.195)	0.183 (0.166)	
- AMENDEM*DOSE*SUBSID	0.033 (0.032)	0.028 (0.027)	

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	173.571	113.556	194.615	176.429	322.500	383.846	265.333	286.667	192.609	218.095	184.815	172.857
X 12k	310.588	248.571	224.091	322.500	261.667	346.429	496.000	337.143	274.286	194.500	220.952	172.857
X 13k	360.000	252.500	234.348	250.000	427.273	318.000	314.667	360.000	180.435	167.826	195.714	188.400
X 21k	308.235	258.095	247.500	246.190	261.053	483.636	254.000	280.667	271.667	261.053	188.000	166.522
X 22k	288.333	259.000	386.923	242.857	392.308	316.667	347.692	353.077	176.522	279.333	204.444	192.917
X 23k	224.167	289.474	195.600	157.187	494.545	494.545	111.000	206.818	318.750	283.333	250.556	179.630

2 - MOYENNES ET ECARTS RELATIFS

X ... = 266.888

X 1.. = 259.546 (-2.75) X 2..= 274.230 (2.75)

X .1. = 246.313 (-7.71) X .2. = 285.402 (6.94) X .3. = 268.949 (0.77)

X ..1 = 270.966 (1.53) X ..2 = 262.810 (-1.53)

X 11. = 223.741 (-16.17) X 12. = 284.132 (6.46) X 13. = 270.764 (1.45)
X 21. = 268.885 (0.75) X 22. = 286.673 (7.41) X 23. = 267.134 (0.09)

X 1.1 = 268.526 (0.61) X 1.2 = 250.565 (-6.12) X 2.1 = 273.405 (2.44) X 2.2 = 275.056 (3.06)

X .11 = 238.658 (-10.58) X .12 = 253.968 (-4.84)
X .21 = 298.651 (11.90) X .22 = 272.154 (1.97)
X .31 = 275.588 (3.26) X .32 = 262.309 (-1.72)

X 111 = 222.241 (-16.73) X 121 = 297.931 (11.63) X 131 = 285.406 (6.94)
X 112 = 225.242 (-15.60) X 122 = 270.333 (1.29) X 132 = 256.121 (-4.03)
X 211 = 255.076 (-4.43) X 221 = 299.370 (12.17) X 231 = 265.770 (-0.42)
X 212 = 282.694 (5.92) X 222 = 273.975 (2.66) X 232 = 268.498 (0.60)

X 11 = 257.174 (-3.64) X 12 = 239.853 (-10.13) X 13 = 375.206 (40.59)
X 14 = 301.089 (12.81) X 15 = 234.867 (-12.00) X 16 = 193.139 (-27.63)

X m1 = 283.674 (6.29) X m2 = 265.254 (-0.61) X m3 = 235.220 (-11.87)
X m4 = 258.939 (-2.98) X m5 = 279.508 (4.73) X m6 = 278.733 (4.44)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	6.83148E+03 (31.0)	1.57316E+04 (47.0)	7.54930E+03 (32.6)
VR2 (cv2%)	1.95410E+03 (16.6)	1.76574E+03 (15.7)	
VR3 (cv3%)	3.28803E+03 (21.5)	3.32570E+03 (21.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.26797E+00	1.60693E+01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.568 (0.464)	0.247 (0.371)	0.514 (0.488)
- DOSE	1.353 (0.724)	0.588 (0.432)	1.225 (0.689)
- AMENDEMENT*DOSE	0.619 (0.449)	0.269 (0.231)	0.561 (0.416)
- SUBSIDIAIRE	0.613 (0.474)	0.678 (0.452)	
- AMENDEMENT*SUBSIDIAIRE	0.526 (0.481)	0.520 (0.484)	
- DOSE*SUBSIDIAIRE	0.833 (0.450)	0.824 (0.454)	
- AMENDEM*DOSE*SUBSID	0.110 (0.104)	0.109 (0.103)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.849 (0.364)	0.477 (0.500)	
- DOSE	2.022 (0.859)	1.137 (0.671)	
- AMENDEMENT*DOSE	0.926 (0.405)	0.520 (0.397)	
- SUBSIDIAIRE	0.262 (0.383)	0.147 (0.296)	
- AMENDEMENT*SUBSIDIAIRE	0.379 (0.452)	0.213 (0.349)	
- DOSE*SUBSIDIAIRE	0.599 (0.442)	0.337 (0.280)	
- AMENDEM*DOSE*SUBSID	0.079 (0.076)	0.044 (0.043)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: PHE2
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.000	5.900	5.900	5.700	6.100	6.000	6.100	5.900	5.800	5.900	6.100	6.000
X 12k	6.200	5.800	5.900	5.800	6.100	6.100	6.300	6.200	6.000	5.900	6.100	5.900
X 13k	6.000	5.800	5.900	5.900	6.000	6.200	6.000	5.900	5.800	5.900	8.500	5.800
X 21k	6.000	5.900	6.000	6.000	5.900	6.000	6.000	5.800	5.900	6.100	6.300	5.800
X 22k	6.000	6.000	6.000	6.100	6.100	6.100	6.100	6.200	6.200	6.400	6.000	5.700
X 23k	5.800	6.100	5.900	5.900	6.300	6.200	5.900	6.100	6.100	6.100	6.100	5.900

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.033

X 1.. = 6.039 (0.09) X 2..= 6.028 (-0.09)

X .1. = 5.962 (-1.17) X .2. = 6.050 (0.28) X .3. = 6.087 (0.90)

X ..1 = 6.094 (1.01) X ..2 = 5.972 (-1.01)

X 11. = 5.950 (-1.38) X 12. = 6.025 (-0.14) X 13. = 6.142 (1.80)
X 21. = 5.975 (-0.97) X 22. = 6.075 (0.69) X 23. = 6.033 (-0.00)

X 1.1 = 6.156 (2.03) X 1.2 = 5.922 (-1.84) X 2.1 = 6.033 (-0.00) X 2.2 = 6.022 (-0.18)

X .11 = 6.008 (-0.41) X .12 = 5.917 (-1.93)
X .21 = 6.083 (0.83) X .22 = 6.017 (-0.28)
X .31 = 6.192 (2.62) X .32 = 5.983 (-0.83)

X 111 = 6.000 (-0.55) X 121 = 6.100 (1.10) X 131 = 6.367 (5.52)
X 112 = 5.900 (-2.21) X 122 = 5.950 (-1.38) X 132 = 5.917 (-1.93)
X 211 = 6.017 (-0.28) X 221 = 6.067 (0.55) X 231 = 6.017 (-0.28)
X 212 = 5.933 (-1.66) X 222 = 6.083 (0.83) X 232 = 6.050 (0.28)

X 11 = 5.958 (-1.24) X 12 = 5.917 (-1.93) X 13 = 6.092 (0.97)
X 14 = 6.042 (0.14) X 15 = 6.008 (-0.41) X 16 = 6.183 (2.49)

X ■1 = 6.117 (1.38) X ■2 = 6.158 (2.07) X ■3 = 5.958 (-1.24)
X ■4 = 5.958 (-1.24) X ■5 = 5.992 (-0.69) X ■6 = 6.017 (-0.28)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.06933E-01 (5.4)	1.11733E-01 (5.5)	1.12167E-01 (5.6)
VR2 (cv2%)	2.23556E-01 (7.8)	6.48889E-02 (4.2)	
VR3 (cv3%)	9.44889E-02 (5.1)	1.26222E-01 (5.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.80561E+00	7.67108E-01	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.021 (0.119)	0.020 (0.116)	0.020 (0.116)
- DOSE	0.923 (0.413)	0.884 (0.429)	0.880 (0.430)
- AMENDEMENT*DOSE	0.407 (0.325)	0.389 (0.313)	0.388 (0.311)
- SUBSIDIAIRE	1.203 (0.676)	4.144 (0.904)	
- AMENDEMENT*SUBSIDIAIRE	2.352 (0.866)	1.761 (0.806)	
- DOSE*SUBSIDIAIRE	0.363 (0.296)	0.272 (0.233)	
- AMENDEM*DOSE*SUBSID	0.901 (0.422)	0.675 (0.477)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.020 (0.116)	0.019 (0.115)	
- DOSE	0.879 (0.425)	0.864 (0.431)	
- AMENDEMENT*DOSE	0.387 (0.313)	0.380 (0.309)	
- SUBSIDIAIRE	2.393 (0.876)	2.353 (0.872)	
- AMENDEMENT*SUBSIDIAIRE	1.978 (0.838)	1.944 (0.834)	
- DOSE*SUBSIDIAIRE	0.305 (0.257)	0.300 (0.254)	
- AMENDEM*DOSE*SUBSID	0.758 (0.478)	0.745 (0.484)	

ANALYSE DE VARIANCE

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84A
parametre: PHK2
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	4.900	4.700	4.800	4.600	4.900	4.800	5.000	4.800	4.900	4.900	4.900	4.900
X 12k	5.000	4.700	4.700	4.700	4.900	5.000	5.100	5.000	4.800	4.900	4.900	4.900
X 13k	4.900	4.800	4.700	4.800	5.000	5.000	4.900	4.800	4.700	4.700	4.700	4.700
X 21k	4.900	4.800	4.900	4.800	4.700	4.900	4.800	4.800	4.900	5.000	5.200	4.900
X 22k	4.900	4.900	4.900	4.900	5.000	4.900	5.000	4.900	5.000	5.200	4.800	4.600
X 23k	4.800	4.900	4.700	4.900	5.000	5.000	4.800	5.000	5.000	4.900	4.900	4.900

2 - MOYENNES ET ECARTS RELATIFS

X ... = 4.872

X 1.. = 4.844 (-0.57) X 2..= 4.900 (0.57)

X .1. = 4.862 (-0.20) X .2. = 4.900 (0.57) X .3. = 4.854 (-0.37)

X ..1 = 4.886 (0.29) X ..2 = 4.858 (-0.29)

X 11. = 4.842 (-0.63) X 12. = 4.883 (0.23) X 13. = 4.808 (-1.31)
X 21. = 4.883 (0.23) X 22. = 4.917 (0.91) X 23. = 4.900 (0.57)

X 1.1 = 4.872 (0.00) X 1.2 = 4.817 (-1.14) X 2.1 = 4.900 (0.57) X 2.2 = 4.900 (0.57)

X .11 = 4.900 (0.57) X .12 = 4.825 (-0.97)
X .21 = 4.917 (0.91) X .22 = 4.883 (0.23)
X .31 = 4.842 (-0.63) X .32 = 4.867 (-0.11)

X 111 = 4.900 (0.57) X 121 = 4.900 (0.57) X 131 = 4.817 (-1.14)
X 112 = 4.783 (-1.82) X 122 = 4.867 (-0.11) X 132 = 4.800 (-1.48)
X 211 = 4.900 (0.57) X 221 = 4.933 (1.25) X 231 = 4.867 (-0.11)
X 212 = 4.867 (-0.11) X 222 = 4.900 (0.57) X 232 = 4.933 (1.25)

X 11 = 4.850 (-0.46) X 12 = 4.783 (-1.82) X 13 = 4.925 (1.08)
X 14 = 4.908 (0.74) X 15 = 4.908 (0.74) X 16 = 4.858 (-0.29)

X ■1 = 4.958 (1.77) X ■2 = 4.808 (-1.31) X ■3 = 4.808 (-1.31)
X ■4 = 4.875 (0.06) X ■5 = 4.892 (0.40) X ■6 = 4.892 (0.40)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.92222E-02 (2.8)	1.80889E-02 (2.8)	1.42222E-02 (2.4)
VR2 (cv2%)	1.05556E-02 (2.1)	3.55556E-03 (1.2)	
VR3 (cv3%)	8.08889E-03 (1.8)	9.48889E-03 (2.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.07842E+00	4.90214E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.890 (0.902)	3.071 (0.912)	3.906 (0.941)
- DOSE	0.744 (0.489)	0.791 (0.468)	1.006 (0.618)
- AMENDEMENT*DOSE	0.311 (0.260)	0.330 (0.274)	0.420 (0.332)
- SUBSIDIAIRE	1.316 (0.696)	3.906 (0.896)	
- AMENDEMENT*SUBSIDIAIRE	1.717 (0.801)	1.464 (0.764)	
- DOSE*SUBSIDIAIRE	1.872 (0.827)	1.595 (0.778)	
- AMENDEM*DOSE*SUBSID	0.429 (0.339)	0.366 (0.298)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.344 (0.960)	4.504 (0.964)	
- DOSE	1.119 (0.665)	1.160 (0.678)	
- AMENDEMENT*DOSE	0.467 (0.365)	0.484 (0.375)	
- SUBSIDIAIRE	1.086 (0.697)	1.126 (0.706)	
- AMENDEMENT*SUBSIDIAIRE	1.086 (0.697)	1.126 (0.706)	
- DOSE*SUBSIDIAIRE	1.184 (0.685)	1.227 (0.698)	
- AMENDEM*DOSE*SUBSID	0.272 (0.233)	0.281 (0.240)	

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.92222E-02 (2.8)	1.80889E-02 (2.8)	1.42222E-02 (2.4)
VR2 (cv2%)	1.05556E-02 (2.1)	3.55556E-03 (1.2)	
VR3 (cv3%)	8.08889E-03 (1.8)	9.48889E-03 (2.0)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.07842E+00	4.90214E+00	
PROBABILITE DU KI 2	1.00000	1.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	2.890 (0.902)	3.071 (0.912)	3.906 (0.941)
- DOSE	0.744 (0.489)	0.791 (0.468)	1.006 (0.618)
- AMENDEMENT*DOSE	0.311 (0.260)	0.330 (0.274)	0.420 (0.332)
- SUBSIDIAIRE	1.316 (0.696)	3.906 (0.896)	
- AMENDEMENT*SUBSIDIAIRE	1.717 (0.801)	1.464 (0.764)	
- DOSE*SUBSIDIAIRE	1.872 (0.827)	1.595 (0.778)	
- AMENDEM*DOSE*SUBSID	0.429 (0.339)	0.366 (0.298)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.344 (0.960)	4.504 (0.964)	
- DOSE	1.119 (0.665)	1.160 (0.678)	
- AMENDEMENT*DOSE	0.467 (0.365)	0.484 (0.375)	
- SUBSIDIAIRE	1.086 (0.697)	1.126 (0.706)	
- AMENDEMENT*SUBSIDIAIRE	1.086 (0.697)	1.126 (0.706)	
- DOSE*SUBSIDIAIRE	1.184 (0.685)	1.227 (0.698)	
- AMENDEM*DOSE*SUBSID	0.272 (0.233)	0.281 (0.240)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: K2OA
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	1.050	1.250	0.870	1.000	1.100	0.950	1.070	0.870	1.050	0.920	1.020	1.020
X 12k	0.840	0.840	1.020	1.000	0.920	0.950	0.690	1.020	0.950	1.230	1.020	1.070
X 13k	0.690	0.840	0.900	0.840	0.900	1.000	0.920	0.820	1.050	1.020	0.950	0.870
X 21k	0.740	0.820	0.820	0.820	1.050	0.950	1.000	0.920	0.820	0.870	1.180	1.020
X 22k	0.820	0.750	0.950	1.050	1.090	0.970	0.840	0.950	1.130	1.020	1.050	1.020
X 23k	0.870	0.840	0.990	1.270	0.900	0.970	1.130	0.920	0.740	0.900	0.870	0.900

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.952

X 1.. = 0.959 (0.77) X 2..= 0.944 (-0.77)

X .1. = 0.966 (1.50) X .2. = 0.968 (1.72) X .3. = 0.921 (-3.23)

X ..1 = 0.944 (-0.74) X ..2 = 0.959 (0.74)

X 11. = 1.014 (6.58) X 12. = 0.963 (1.15) X 13. = 0.900 (-5.42)
X 21. = 0.917 (-3.58) X 22. = 0.973 (2.29) X 23. = 0.942 (-1.04)

X 1.1 = 0.945 (-0.69) X 1.2 = 0.973 (2.23) X 2.1 = 0.944 (-0.80) X 2.2 = 0.944 (-0.74)

X .11 = 0.981 (3.08) X .12 = 0.951 (-0.07)
X .21 = 0.943 (-0.86) X .22 = 0.993 (4.31)
X .31 = 0.909 (-4.45) X .32 = 0.933 (-2.00)

X 111 = 1.027 (7.90) X 121 = 0.907 (-4.71) X 131 = 0.902 (-5.24)
X 112 = 1.002 (5.27) X 122 = 1.018 (7.02) X 132 = 0.898 (-5.59)
X 211 = 0.935 (-1.74) X 221 = 0.980 (2.99) X 231 = 0.917 (-3.66)
X 212 = 0.900 (-5.42) X 222 = 0.967 (1.59) X 232 = 0.967 (1.59)

X L1 = 0.866 (-9.01) X L2 = 0.961 (0.98) X L3 = 0.979 (2.90)
X L4 = 0.929 (-2.35) X L5 = 0.975 (2.47) X L6 = 0.999 (5.01)

X M1 = 0.998 (4.83) X M2 = 0.948 (-0.42) X M3 = 0.963 (1.24)
X M4 = 0.973 (2.29) X M5 = 0.911 (-4.28) X M6 = 0.917 (-3.66)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.98541E-02 (14.8)	2.26854E-02 (15.8)	2.14481E-02 (15.4)
VR2 (cv2%)	6.90583E-03 (8.7)	7.33583E-03 (9.0)	
VR3 (cv3%)	9.31583E-03 (10.1)	9.22983E-03 (10.1)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.95040E+00	5.24470E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.197 (0.335)	0.172 (0.316)	0.182 (0.323)
- DOSE	0.855 (0.440)	0.749 (0.487)	0.792 (0.468)
- AMENDEMENT*DOSE	1.594 (0.778)	1.395 (0.734)	1.475 (0.748)
- SUBSIDIAIRE	0.523 (0.494)	0.492 (0.482)	
- AMENDEMENT*SUBSIDIAIRE	0.358 (0.438)	0.361 (0.440)	
- DOSE*SUBSIDIAIRE	1.050 (0.634)	1.060 (0.637)	
- AMENDEM*DOSE*SUBSID	1.316 (0.714)	1.328 (0.717)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.294 (0.403)	0.271 (0.389)	
- DOSE	1.278 (0.713)	1.178 (0.684)	
- AMENDEMENT*DOSE	2.381 (0.899)	2.194 (0.880)	
- SUBSIDIAIRE	0.272 (0.389)	0.250 (0.375)	
- AMENDEMENT*SUBSIDIAIRE	0.251 (0.376)	0.231 (0.362)	
- DOSE*SUBSIDIAIRE	0.736 (0.488)	0.678 (0.483)	
- AMENDEM*DOSE*SUBSID	0.922 (0.407)	0.850 (0.437)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: NAT3A
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	0.870	1.220	1.130	1.300	0.610	0.700	0.780	0.610	0.700	0.700	0.610	0.520
X 12k	0.610	0.570	0.610	0.780	0.540	0.610	0.570	0.610	0.610	0.830	0.570	0.520
X 13k	0.650	0.610	0.570	0.610	0.570	0.610	0.610	0.570	0.700	0.650	0.700	0.830
X 21k	0.610	0.650	1.260	1.000	0.650	0.610	0.610	0.610	0.650	0.700	0.870	0.650
X 22k	0.610	0.610	0.610	0.740	0.740	0.570	0.520	0.520	0.870	0.780	0.700	0.520
X 23k	0.700	0.830	0.380	0.510	0.910	0.740	0.610	0.610	0.700	0.780	0.570	0.540

2 - MOYENNES ET ECARTS RELATIFS

X ... = 0.686

X 1.. = 0.691 (0.65) X 2..= 0.682 (-0.65)

X .1. = 0.776 (13.08) X .2. = 0.634 (-7.57) X .3. = 0.648 (-5.51)

X ..1 = 0.683 (-0.49) X ..2 = 0.689 (0.49)

X 11. = 0.813 (18.42) X 12. = 0.619 (-9.76) X 13. = 0.640 (-6.72)
X 21. = 0.739 (7.73) X 22. = 0.649 (-5.38) X 23. = 0.657 (-4.29)

X 1.1 = 0.667 (-2.75) X 1.2 = 0.714 (4.05) X 2.1 = 0.698 (1.78) X 2.2 = 0.665 (-3.08)

X .11 = 0.779 (13.56) X .12 = 0.773 (12.59)
X .21 = 0.630 (-8.18) X .22 = 0.638 (-6.96)
X .31 = 0.639 (-6.84) X .32 = 0.658 (-4.17)

X 111 = 0.783 (14.17) X 121 = 0.585 (-14.74) X 131 = 0.633 (-7.69)
X 112 = 0.842 (22.67) X 122 = 0.653 (-4.78) X 132 = 0.647 (-5.75)
X 211 = 0.775 (12.96) X 221 = 0.675 (-1.62) X 231 = 0.645 (-5.99)
X 212 = 0.703 (2.51) X 222 = 0.623 (-9.15) X 232 = 0.668 (-2.59)

X L1 = 0.712 (3.72) X L2 = 0.792 (15.38) X L3 = 0.655 (-4.53)
X L4 = 0.603 (-12.19) X L5 = 0.723 (5.30) X L6 = 0.633 (-7.69)

X M1 = 0.773 (12.59) X M2 = 0.769 (12.11) X M3 = 0.712 (3.72)
X M4 = 0.594 (-13.40) X M5 = 0.637 (-7.21) X M6 = 0.633 (-7.81)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	4.70762E-02 (31.6)	4.47129E-02 (30.8)	4.15731E-02 (29.7)
VR2 (cv2%)	1.04567E-02 (14.9)	9.88000E-03 (14.5)	
VR3 (cv3%)	7.68067E-03 (12.8)	7.79600E-03 (12.9)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.77697E+01	1.67241E+01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.030 (0.142)	0.032 (0.146)	0.034 (0.151)
- DOSE	3.104 (0.939)	3.268 (0.946)	3.514 (0.956)
- AMENDEMENT*DOSE	0.403 (0.322)	0.424 (0.336)	0.456 (0.355)
- SUBSIDIAIRE	0.077 (0.212)	0.081 (0.218)	
- AMENDEMENT*SUBSIDIAIRE	3.750 (0.939)	3.694 (0.937)	
- DOSE*SUBSIDIAIRE	0.124 (0.116)	0.122 (0.114)	
- AMENDEM*DOSE*SUBSID	1.191 (0.679)	1.174 (0.674)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.060 (0.197)	0.062 (0.201)	
- DOSE	6.161 (0.996)	6.416 (0.996)	
- AMENDEMENT*DOSE	0.799 (0.459)	0.832 (0.444)	
- SUBSIDIAIRE	0.034 (0.151)	0.035 (0.154)	
- AMENDEMENT*SUBSIDIAIRE	1.214 (0.725)	1.265 (0.735)	
- DOSE*SUBSIDIAIRE	0.040 (0.039)	0.042 (0.041)	
- AMENDEM*DOSE*SUBSID	0.386 (0.313)	0.402 (0.323)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: CAT1A
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	7.780	8.780	7.090	7.190	7.240	7.090	6.340	6.590	5.890	5.290	5.590	5.390
X 12k	7.090	6.890	7.240	6.940	6.690	7.140	5.990	6.290	6.740	6.790	5.740	5.600
X 13k	7.040	6.740	6.990	6.490	6.990	7.190	6.390	6.590	6.140	6.190	5.740	5.340
X 21k	6.190	6.690	6.990	7.240	6.840	6.490	6.300	6.540	6.290	6.040	7.830	5.940
X 22k	7.140	6.690	6.940	6.790	7.390	6.990	6.090	6.090	7.980	6.990	5.790	5.740
X 23k	6.840	7.090	7.190	7.630	6.440	6.290	6.740	6.290	5.740	5.590	5.590	5.640

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.587

X 1.. = 6.590 (0.03) X 2..= 6.585 (-0.03)

X .1. = 6.652 (0.97) X .2. = 6.657 (1.05) X .3. = 6.454 (-2.02)

X ..1 = 6.639 (0.79) X ..2 = 6.536 (-0.79)

X 11. = 6.688 (1.53) X 12. = 6.595 (0.11) X 13. = 6.486 (-1.54)
X 21. = 6.615 (0.42) X 22. = 6.718 (1.99) X 23. = 6.422 (-2.50)

X 1.1 = 6.595 (0.11) X 1.2 = 6.584 (-0.05) X 2.1 = 6.684 (1.46) X 2.2 = 6.487 (-1.53)

X .11 = 6.697 (1.67) X .12 = 6.606 (0.28)
X .21 = 6.735 (2.24) X .22 = 6.578 (-0.14)
X .31 = 6.486 (-1.54) X .32 = 6.422 (-2.50)

X 111 = 6.655 (1.02) X 121 = 6.582 (-0.09) X 131 = 6.548 (-0.59)
X 112 = 6.722 (2.04) X 122 = 6.608 (0.32) X 132 = 6.423 (-2.49)
X 211 = 6.740 (2.31) X 221 = 6.888 (4.57) X 231 = 6.423 (-2.49)
X 212 = 6.490 (-1.48) X 222 = 6.548 (-0.59) X 232 = 6.422 (-2.52)

X L1 = 7.080 (7.48) X L2 = 7.060 (7.17) X L3 = 6.898 (4.72)
X L4 = 6.353 (-3.55) X L5 = 6.306 (-4.28) X L6 = 5.827 (-11.54)

X M1 = 6.982 (6.00) X M2 = 6.527 (-0.91) X M3 = 6.619 (0.48)
X M4 = 6.465 (-1.86) X M5 = 6.557 (-0.47) X M6 = 6.374 (-3.24)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.17998E-01 (10.9)	1.02301E+00 (15.4)	5.14240E-01 (10.9)
VR2 (cv2%)	1.54582E-01 (6.0)	5.54789E-02 (3.6)	
VR3 (cv3%)	1.15678E-01 (5.2)	1.35498E-01 (5.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	1.23012E+01	2.63493E+01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.001 (0.022)	0.000 (0.017)	0.001 (0.022)
- DOSE	0.618 (0.448)	0.313 (0.262)	0.623 (0.451)
- AMENDEMENT*DOSE	0.142 (0.132)	0.072 (0.070)	0.143 (0.133)
- SUBSIDIAIRE	1.257 (0.686)	3.502 (0.881)	
- AMENDEMENT*SUBSIDIAIRE	1.355 (0.746)	1.157 (0.708)	
- DOSE*SUBSIDIAIRE	0.119 (0.112)	0.101 (0.097)	
- AMENDEM*DOSE*SUBSID	0.943 (0.405)	0.805 (0.462)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.001 (0.029)	0.001 (0.023)	
- DOSE	1.141 (0.672)	0.664 (0.476)	
- AMENDEMENT*DOSE	0.262 (0.226)	0.153 (0.141)	
- SUBSIDIAIRE	0.693 (0.414)	0.403 (0.464)	
- AMENDEMENT*SUBSIDIAIRE	0.559 (0.465)	0.325 (0.422)	
- DOSE*SUBSIDIAIRE	0.049 (0.048)	0.028 (0.027)	
- AMENDEM*DOSE*SUBSID	0.389 (0.315)	0.226 (0.199)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 1984A
parametre: MGT2A
unite : meq/100g

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	131.300	115.600	106.600	111.500	124.400	119.500	114.600	105.500	101.400	103.000	111.300	116.200
X 12k	139.500	109.900	126.100	139.200	119.500	142.500	112.900	123.600	112.900	112.900	115.400	119.500
X 13k	108.200	114.800	104.900	108.200	131.000	129.400	112.100	101.400	91.500	92.400	88.200	103.000
X 21k	123.000	121.400	123.000	134.500	114.600	122.800	106.300	100.600	108.000	120.300	192.700	106.300
X 22k	118.900	109.000	138.400	130.200	136.800	128.500	113.700	117.000	132.600	168.800	101.400	103.000
X 23k	118.100	124.700	122.800	134.400	153.200	122.800	99.800	116.200	108.800	111.300	114.600	125.200

2 - MOYENNES ET ECARTS RELATIFS

X ... = 118.661

X 1.. = 114.442 (-3.56) X 2..= 122.881 (3.56)

X .1. = 118.100 (-0.47) X .2. = 123.842 (4.37) X .3. = 114.042 (-3.89)

X ..1 = 118.847 (0.16) X ..2 = 118.475 (-0.16)

X 11. = 113.408 (-4.43) X 12. = 122.825 (3.51) X 13. = 107.092 (-9.75)
X 21. = 122.792 (3.48) X 22. = 124.858 (5.22) X 23. = 120.992 (1.96)

X 1.1 = 113.989 (-3.94) X 1.2 = 114.894 (-3.17) X 2.1 = 123.706 (4.25) X 2.2 = 122.056 (2.86)

X .11 = 121.433 (2.34) X .12 = 114.767 (-3.28)
X .21 = 122.342 (3.10) X .22 = 125.342 (5.63)
X .31 = 112.767 (-4.97) X .32 = 115.317 (-2.82)

X 111 = 114.933 (-3.14) X 121 = 121.050 (2.01) X 131 = 105.983 (-10.68)
X 112 = 111.883 (-5.71) X 122 = 124.600 (5.00) X 132 = 108.200 (-8.82)
X 211 = 127.933 (7.81) X 221 = 123.633 (4.19) X 231 = 119.550 (0.75)
X 212 = 117.650 (-0.85) X 222 = 126.083 (6.25) X 232 = 122.433 (3.18)

X L1 = 119.533 (0.74) X L2 = 123.317 (3.92) X L3 = 128.750 (8.50)
X L4 = 110.308 (-7.04) X L5 = 113.658 (-4.22) X L6 = 116.400 (-1.91)

X M1 = 131.075 (10.46) X M2 = 112.167 (-5.47) X M3 = 112.925 (-4.83)
X M4 = 118.308 (-0.30) X M5 = 120.150 (1.25) X M6 = 117.342 (-1.11)

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	2.88607E+02 (14.3)	2.84221E+02 (14.2)	2.20798E+02 (12.5)
VR2 (cv2%)	1.46732E+02 (10.2)	1.49511E+02 (10.3)	
VR3 (cv3%)	2.21067E+02 (12.5)	2.20512E+02 (12.5)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	9.19691E-01	8.33128E-01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	4.442 (0.957)	4.510 (0.959)	5.806 (0.976)
- DOSE	2.016 (0.847)	2.047 (0.851)	2.635 (0.910)
- AMENDEMENT*DOSE	0.746 (0.489)	0.757 (0.483)	0.975 (0.397)
- SUBSIDIAIRE	0.017 (0.103)	0.017 (0.102)	
- AMENDEMENT*SUBSIDIAIRE	0.133 (0.281)	0.133 (0.282)	
- DOSE*SUBSIDIAIRE	0.808 (0.461)	0.810 (0.460)	
- AMENDEM*DOSE*SUBSID	0.117 (0.110)	0.117 (0.110)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	5.327 (0.976)	5.366 (0.977)	
- DOSE	2.418 (0.902)	2.436 (0.904)	
- AMENDEMENT*DOSE	0.894 (0.418)	0.901 (0.415)	
- SUBSIDIAIRE	0.010 (0.084)	0.010 (0.084)	
- AMENDEMENT*SUBSIDIAIRE	0.122 (0.272)	0.123 (0.273)	
- DOSE*SUBSIDIAIRE	0.742 (0.486)	0.748 (0.483)	
- AMENDEM*DOSE*SUBSID	0.107 (0.102)	0.108 (0.103)	

3.3. Analyses de variance des paramètres "sol" observés en fin de cycle (84 B) (pour les sigles cf l'annexe 1.2.).

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 848
parametre: C1B
unite : %

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.830	3.030	2.710	2.550	2.650	2.570	2.950	2.970	2.680	2.620	2.760	2.870
X 12k	2.480	2.320	2.350	2.690	2.470	2.740	2.670	2.660	2.610	2.690	2.520	2.370
X 13k	2.440	2.480	2.540	2.730	2.750	2.510	2.450	2.690	2.810	2.840	2.850	2.670
X 21k	2.450	2.460	2.470	2.570	2.520	2.500	3.080	2.900	2.550	2.530	2.790	2.850
X 22k	2.390	2.420	2.610	2.570	2.610	2.500	2.430	2.430	2.770	2.760	2.530	2.930
X 23k	2.550	2.650	2.570	2.440	2.480	2.600	2.580	2.550	2.720	2.470	2.640	2.700

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.626

X 1.. = 2.653 (1.03) X 2..= 2.599 (-1.03)

X .1. = 2.702 (2.90) X .2. = 2.563 (-2.40) X .3. = 2.613 (-0.51)

X ..1 = 2.618 (-0.30) X ..2 = 2.634 (0.30)

X 11. = 2.766 (5.31) X 12. = 2.547 (-3.00) X 13. = 2.647 (0.78)
X 21. = 2.639 (0.49) X 22. = 2.579 (-1.79) X 23. = 2.579 (-1.79)

X 1.1 = 2.640 (0.52) X 1.2 = 2.667 (1.54) X 2.1 = 2.597 (-1.13) X 2.2 = 2.602 (-0.94)

X .11 = 2.703 (2.94) X .12 = 2.702 (2.87)
X .21 = 2.537 (-3.41) X .22 = 2.590 (-1.38)
X .31 = 2.615 (-0.43) X .32 = 2.611 (-0.59)

X 111 = 2.763 (5.22) X 121 = 2.517 (-4.17) X 131 = 2.640 (0.52)
X 112 = 2.768 (5.41) X 122 = 2.578 (-1.82) X 132 = 2.653 (1.03)
X 211 = 2.643 (0.65) X 221 = 2.557 (-2.65) X 231 = 2.590 (-1.38)
X 212 = 2.635 (0.33) X 222 = 2.602 (-0.94) X 232 = 2.568 (-2.21)

X L1 = 2.542 (-3.22) X L2 = 2.567 (-2.27) X L3 = 2.575 (-1.95)
X L4 = 2.697 (2.68) X L5 = 2.671 (1.70) X L6 = 2.707 (3.06)

X M1 = 2.726 (3.79) X M2 = 2.597 (-1.13) X M3 = 2.608 (-0.68)
X M4 = 2.530 (-3.66) X M5 = 2.621 (-0.21) X M6 = 2.676 (1.89)

Traitements	$\bar{x}$
Témoin	2,92
8T - 30%	2,66
8T - 50%	2,60
12T - 30%	2,73
12T - 50%	2,76
16T - 30%	2,60
16T - 50%	2,72

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	3.73072E-02 (7.4)	3.91692E-02 (7.5)	3.29150E-02 (6.9)
VR2 (cv2%)	3.87250E-03 (2.4)	7.11583E-03 (3.2)	
VR3 (cv3%)	1.53832E-02 (4.7)	1.47345E-02 (4.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	8.89316E+00	7.60532E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.416 (0.756)	1.348 (0.745)	1.605 (0.782)
- DOSE	3.201 (0.943)	3.048 (0.936)	3.628 (0.960)
- AMENDEMENT*DOSE	1.029 (0.627)	0.980 (0.391)	1.167 (0.668)
- SUBSIDIAIRE	1.165 (0.669)	0.634 (0.466)	
- AMENDEMENT*SUBSIDIAIRE	0.137 (0.285)	0.143 (0.291)	
- DOSE*SUBSIDIAIRE	0.412 (0.328)	0.430 (0.340)	
- AMENDEM*DOSE*SUBSID	0.013 (0.012)	0.014 (0.013)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.296 (0.868)	2.224 (0.862)	
- DOSE	5.191 (0.991)	5.028 (0.990)	
- AMENDEMENT*DOSE	1.670 (0.803)	1.617 (0.793)	
- SUBSIDIAIRE	0.196 (0.336)	0.190 (0.331)	
- AMENDEMENT*SUBSIDIAIRE	0.092 (0.239)	0.089 (0.236)	
- DOSE*SUBSIDIAIRE	0.276 (0.236)	0.267 (0.230)	
- AMENDEM*DOSE*SUBSID	0.009 (0.008)	0.009 (0.008)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : 84B
parametre: N1B
unite : %.

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	2.290	2.350	2.150	2.070	2.020	2.050	2.220	2.210	2.090	2.180	2.120	2.110
X 12k	1.870	1.910	1.900	2.110	1.860	2.180	2.030	2.010	2.090	2.100	1.890	1.880
X 13k	1.900	2.020	2.030	2.140	2.080	1.900	2.030	2.050	2.110	2.140	2.200	2.010
X 21k	2.030	2.020	1.940	2.060	2.010	2.050	2.250	2.380	2.040	2.070	2.100	2.160
X 22k	1.900	2.000	2.150	1.940	2.050	1.880	1.810	1.880	2.030	1.960	1.890	2.250
X 23k	2.110	2.120	1.980	2.020	1.950	2.000	1.940	1.940	2.060	1.850	2.040	2.020

2 - MOYENNES ET ECARTS RELATIFS

X ... = 2.044

X 1.. = 2.064 (0.96) X 2..= 2.024 (-0.96)

X .1. = 2.124 (3.89) X .2. = 1.982 (-3.04) X .3. = 2.027 (-0.86)

X ..1 = 2.032 (-0.58) X ..2 = 2.056 (0.58)

X 11. = 2.155 (5.42) X 12. = 1.986 (-2.85) X 13. = 2.051 (0.33)
X 21. = 2.092 (2.36) X 22. = 1.978 (-3.22) X 23. = 2.002 (-2.04)

X 1.1 = 2.049 (0.23) X 1.2 = 2.079 (1.70) X 2.1 = 2.016 (-1.40) X 2.2 = 2.033 (-0.53)

X .11 = 2.105 (2.98) X .12 = 2.142 (4.81)
X .21 = 1.956 (-4.32) X .22 = 2.008 (-1.75)
X .31 = 2.036 (-0.41) X .32 = 2.017 (-1.30)

X 111 = 2.148 (5.10) X 121 = 1.940 (-5.10) X 131 = 2.058 (0.69)
X 112 = 2.162 (5.75) X 122 = 2.032 (-0.61) X 132 = 2.043 (-0.04)
X 211 = 2.062 (0.86) X 221 = 1.972 (-3.55) X 231 = 2.013 (-1.51)
X 212 = 2.123 (3.87) X 222 = 1.985 (-2.89) X 232 = 1.992 (-2.57)

X L1 = 2.043 (-0.04) X L2 = 2.041 (-0.16) X L3 = 2.002 (-2.04)
X L4 = 2.063 (0.90) X L5 = 2.060 (0.77) X L6 = 2.056 (0.57)

X M1 = 2.087 (2.12) X M2 = 2.050 (0.29) X M3 = 2.010 (-1.67)
X M4 = 2.008 (-1.75) X M5 = 2.041 (-0.16) X M6 = 2.068 (1.18)

Traitements	$\bar{x}$
Témoin	2,14
8T - 30%	1,96
8T - 50%	1,96
12T - 30%	2,10
12T - 50%	2,05
16T - 30%	2,04
16T - 50%	2,12

date :84B parametre :N1B unite : %.

DONNEES :

DDL = 20 NI = 12 SE = 0.018

4 T = 2.124
8 T = 1.982
12 T = 2.027

RESULTATS :

3 - ANALYSE DE LA VARIANCE

	1	2	3
	8 T	12 T	4 T
1 8 T			+
2 12 T			
3 4 T			

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.69300E-02 (6.4)	1.57360E-02 (6.1)	1.81875E-02 (6.6)
VR2 (cv2%)	1.83222E-03 (2.1)	5.11556E-03 (3.5)	
VR3 (cv3%)	9.49889E-03 (4.8)	8.84222E-03 (4.6)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	6.80442E+00	3.01193E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	1.654 (0.792)	1.780 (0.809)	1.540 (0.773)
- DOSE	7.438 (0.997)	8.003 (0.998)	6.924 (0.996)
- AMENDEMENT*DOSE	0.289 (0.245)	0.311 (0.260)	0.269 (0.230)
- SUBSIDIAIRE	5.606 (0.937)	2.008 (0.785)	
- AMENDEMENT*SUBSIDIAIRE	0.071 (0.212)	0.076 (0.219)	
- DOSE*SUBSIDIAIRE	0.880 (0.430)	0.945 (0.404)	
- AMENDEM*DOSE*SUBSID	0.637 (0.458)	0.684 (0.482)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	2.393 (0.876)	2.494 (0.883)	
- DOSE	10.759 (1.000)	11.217 (1.000)	
- AMENDEMENT*DOSE	0.418 (0.334)	0.436 (0.345)	
- SUBSIDIAIRE	0.878 (0.356)	0.915 (0.345)	
- AMENDEMENT*SUBSIDIAIRE	0.057 (0.193)	0.060 (0.197)	
- DOSE*SUBSIDIAIRE	0.714 (0.499)	0.745 (0.484)	
- AMENDEM*DOSE*SUBSID	0.517 (0.395)	0.539 (0.408)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : B4B
parametre: C/N1B
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	12.358	12.894	12.605	12.319	13.119	12.537	13.288	13.439	12.823	12.018	13.019	13.602
X 12k	13.262	12.147	12.368	12.749	13.280	12.569	13.153	13.234	12.488	12.810	13.333	12.606
X 13k	12.842	12.277	12.512	12.757	13.221	13.211	12.069	13.122	13.318	13.271	12.955	13.284
X 21k	12.069	12.178	12.732	12.476	12.537	12.195	13.689	12.185	12.500	12.222	13.286	13.194
X 22k	12.579	12.100	12.140	13.247	12.732	13.298	13.425	12.926	13.645	14.082	13.386	13.022
X 23k	12.085	12.500	12.980	12.079	12.718	13.000	13.299	13.144	13.204	13.351	12.941	13.366

2 - MOYENNES ET ECARTS RELATIFS

X ... = 12.852

X 1.. = 12.857 (0.04) X 2..= 12.848 (-0.04)

X .1. = 12.720 (-1.03) X .2. = 12.941 (0.69) X .3. = 12.896 (0.34)

X ..1 = 12.888 (0.28) X ..2 = 12.817 (-0.28)

X 11. = 12.835 (-0.14) X 12. = 12.833 (-0.15) X 13. = 12.903 (0.40)
X 21. = 12.605 (-1.92) X 22. = 13.048 (1.53) X 23. = 12.889 (0.29)

X 1.1 = 12.890 (0.29) X 1.2 = 12.825 (-0.22) X 2.1 = 12.886 (0.26) X 2.2 = 12.809 (-0.34)

X .11 = 12.835 (-0.13) X .12 = 12.605 (-1.93)
X .21 = 12.983 (1.01) X .22 = 12.899 (0.36)
X .31 = 12.845 (-0.05) X .32 = 12.947 (0.74)

X 111 = 12.869 (0.13) X 121 = 12.981 (1.00) X 131 = 12.819 (-0.26)
X 112 = 12.801 (-0.40) X 122 = 12.686 (-1.30) X 132 = 12.987 (1.05)
X 211 = 12.802 (-0.39) X 221 = 12.985 (1.03) X 231 = 12.871 (0.15)
X 212 = 12.408 (-3.45) X 222 = 13.112 (2.02) X 232 = 12.907 (0.42)

X L1 = 12.441 (-3.20) X L2 = 12.580 (-2.12) X L3 = 12.868 (0.12)
X L4 = 13.081 (1.78) X L5 = 12.978 (0.97) X L6 = 13.166 (2.44)

X M1 = 13.069 (1.69) X M2 = 12.677 (-1.36) X M3 = 12.976 (0.96)
X M4 = 12.609 (-1.89) X M5 = 12.832 (-0.16) X M6 = 12.950 (0.76)

Traitements	$\bar{x}$
Témoin	13,7
8T - 30%	13,6
8T - 50%	13,3
12T - 30%	13,0
12T - 50%	13,5
16T - 30%	12,8
16T - 50%	12,9

3 - ANALYSE DE LA VARIANCE

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	1.82270E-01 (3.3)	3.01200E-01 (4.3)	1.30471E-01 (2.8)
VR2 (cv2%)	2.80703E-02 (1.3)	1.48311E-01 (3.0)	
VR3 (cv3%)	1.99909E-01 (3.5)	1.75861E-01 (3.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	4.97639E+00	1.93142E+00	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	0.009 (0.077)	0.005 (0.060)	0.012 (0.092)
- DOSE	1.792 (0.814)	1.085 (0.646)	2.504 (0.900)
- AMENDEMENT*DOSE	1.630 (0.785)	0.987 (0.389)	2.278 (0.873)
- SUBSIDIAIRE	3.216 (0.868)	0.609 (0.475)	
- AMENDEMENT*SUBSIDIAIRE	0.003 (0.045)	0.004 (0.048)	
- DOSE*SUBSIDIAIRE	0.831 (0.451)	0.945 (0.405)	
- AMENDEM*DOSE*SUBSID	1.135 (0.662)	1.290 (0.707)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	0.009 (0.079)	0.007 (0.070)	
- DOSE	1.860 (0.836)	1.463 (0.760)	
- AMENDEMENT*DOSE	1.692 (0.807)	1.331 (0.727)	
- SUBSIDIAIRE	0.514 (0.484)	0.404 (0.465)	
- AMENDEMENT*SUBSIDIAIRE	0.004 (0.048)	0.003 (0.043)	
- DOSE*SUBSIDIAIRE	0.946 (0.397)	0.744 (0.485)	
- AMENDEM*DOSE*SUBSID	1.291 (0.717)	1.016 (0.629)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : B4B
parametre: PHE1B
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	6.700	6.700	6.800	7.000	6.800	7.100	7.000	6.600	6.600	6.700	7.400	6.800
X 12k	7.200	7.400	7.500	6.800	7.700	7.500	7.400	7.500	7.400	7.600	7.300	7.600
X 13k	7.800	7.800	7.700	7.500	7.700	7.900	7.700	7.500	7.700	7.600	7.400	7.700
X 21k	6.700	6.500	6.900	6.400	6.500	6.500	6.300	7.100	6.800	6.600	7.000	6.800
X 22k	7.400	6.900	7.300	7.600	7.300	7.300	7.300	7.400	7.400	7.600	7.400	7.000
X 23k	7.700	7.800	7.800	7.800	7.000	7.500	7.600	7.600	7.000	7.600	7.400	7.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 7.246

X 1.. = 7.308 (0.86) X 2..= 7.183 (-0.86)

X .1. = 6.762 (-6.67) X .2. = 7.367 (1.67) X .3. = 7.608 (5.00)

X ..1 = 7.239 (-0.10) X ..2 = 7.253 (0.10)

X 11. = 6.850 (-5.46) X 12. = 7.408 (2.24) X 13. = 7.667 (5.81)
X 21. = 6.675 (-7.88) X 22. = 7.325 (1.09) X 23. = 7.550 (4.20)

X 1.1 = 7.322 (1.05) X 1.2 = 7.294 (0.67) X 2.1 = 7.156 (-1.25) X 2.2 = 7.211 (-0.48)

X .11 = 6.792 (-6.27) X .12 = 6.733 (-7.07)
X .21 = 7.383 (1.90) X .22 = 7.350 (1.44)
X .31 = 7.542 (4.08) X .32 = 7.675 (5.92)

X 111 = 6.883 (-5.00) X 121 = 7.417 (2.36) X 131 = 7.667 (5.81)
X 112 = 6.817 (-5.92) X 122 = 7.400 (2.13) X 132 = 7.667 (5.81)
X 211 = 6.700 (-7.53) X 221 = 7.350 (1.44) X 231 = 7.417 (2.36)
X 212 = 6.650 (-8.22) X 222 = 7.300 (0.75) X 232 = 7.683 (6.04)

X L1 = 7.217 (-0.40) X L2 = 7.258 (0.17) X L3 = 7.233 (-0.17)
X L4 = 7.250 (0.06) X L5 = 7.217 (-0.40) X L6 = 7.300 (0.75)

X M1 = 7.233 (-0.17) X M2 = 7.258 (0.17) X M3 = 7.225 (-0.29)
X M4 = 7.233 (-0.17) X M5 = 7.200 (-0.63) X M6 = 7.325 (1.09)

Traitements	$\bar{x}$
Témoin	5,95
8T - 30%	7,40
8T - 50%	7,2
12T - 30%	7,1
12T - 50%	7,3
16T - 30%	7,5
16T - 50%	6,5

date :84B
DONNEES :

parametre :PHEIB

unite : -

DDL = 20 NI = 12 SE = 0.068

4 T = 6.762
8 T = 7.367
12 T = 7.608

RESULTATS :

3 - ANALYSE DE LA VARIANCE

	1 4 T	2 8 T	3 12 T
1 4 T		++	++
2 8 T			+
3 12 T			

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	5.90500E-02 (3.4)	5.69833E-02 (3.3)	6.82500E-02 (3.6)
VR2 (cv2%)	4.01389E-02 (2.8)	5.71389E-02 (3.3)	
VR3 (cv3%)	6.08722E-02 (3.4)	5.74722E-02 (3.3)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	3.19250E-01	3.96727E-04	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	4.763 (0.963)	4.936 (0.966)	4.121 (0.947)
- DOSE	77.145 (1.000)	79.943 (1.000)	66.746 (1.000)
- AMENDEMENT*DOSE	0.219 (0.193)	0.227 (0.199)	0.189 (0.170)
- SUBSIDIAIRE	0.087 (0.225)	0.061 (0.191)	
- AMENDEMENT*SUBSIDIAIRE	0.513 (0.487)	0.544 (0.474)	
- DOSE*SUBSIDIAIRE	1.070 (0.641)	1.133 (0.661)	
- AMENDEM*DOSE*SUBSID	0.637 (0.458)	0.674 (0.477)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	4.843 (0.970)	4.913 (0.971)	
- DOSE	78.447 (1.000)	79.580 (1.000)	
- AMENDEMENT*DOSE	0.222 (0.196)	0.226 (0.199)	
- SUBSIDIAIRE	0.060 (0.197)	0.061 (0.198)	
- AMENDEMENT*SUBSIDIAIRE	0.538 (0.473)	0.546 (0.470)	
- DOSE*SUBSIDIAIRE	1.122 (0.666)	1.138 (0.671)	
- AMENDEM*DOSE*SUBSID	0.667 (0.478)	0.677 (0.483)	

ANALYSE DE VARIANCE
annee:1984

INFLUENCE DE 3 DOSES DE CAO DE 2 AMENDEMENTS CALCIQUES DIFFERENTS
SUR UNE CULTURE DE MAIS SUR VERTISOL HYPERMAGNESIEN

date : B4B
parametre: PHKCL1B
unite : -

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1 - DONNEES OBSERVEES

	bloc 1		bloc 2		bloc 3		bloc 4		bloc 5		bloc 6	
X 11k	5.700	5.500	5.700	5.800	5.700	6.000	6.000	5.400	5.500	5.700	6.600	5.900
X 12k	6.200	6.400	6.600	5.600	6.700	6.400	6.300	6.400	6.400	6.600	6.300	6.600
X 13k	6.700	6.600	6.600	6.200	6.700	6.900	6.700	6.500	6.700	6.800	6.600	6.700
X 21k	5.500	5.400	5.700	5.600	5.300	5.700	5.300	6.200	5.700	5.500	5.900	5.700
X 22k	6.400	5.800	6.100	6.500	6.400	6.300	6.200	6.400	6.400	6.500	6.300	6.000
X 23k	6.700	6.800	6.800	6.700	5.900	6.500	6.500	6.700	6.200	6.700	6.700	6.800

2 - MOYENNES ET ECARTS RELATIFS

X ... = 6.215

X 1.. = 6.269 (0.87) X 2..= 6.161 (-0.87)

X .1. = 5.708 (-8.16) X .2. = 6.325 (1.77) X .3. = 6.612 (6.39)

X ..1 = 6.214 (-0.02) X ..2 = 6.217 (0.02)

X 11. = 5.792 (-6.82) X 12. = 6.375 (2.57) X 13. = 6.642 (6.86)
X 21. = 5.625 (-9.50) X 22. = 6.275 (0.96) X 23. = 6.583 (5.92)

X 1.1 = 6.317 (1.63) X 1.2 = 6.222 (0.11) X 2.1 = 6.111 (-1.68) X 2.2 = 6.211 (-0.07)

X .11 = 5.717 (-8.02) X .12 = 5.700 (-8.29)
X .21 = 6.358 (2.30) X .22 = 6.292 (1.23)
X .31 = 6.567 (5.65) X .32 = 6.658 (7.13)

X 111 = 5.867 (-5.61) X 121 = 6.417 (3.24) X 131 = 6.667 (7.26)
X 112 = 5.717 (-8.02) X 122 = 6.333 (1.90) X 132 = 6.617 (6.46)
X 211 = 5.567 (-10.44) X 221 = 6.300 (1.36) X 231 = 6.467 (4.04)
X 212 = 5.683 (-8.56) X 222 = 6.250 (0.56) X 232 = 6.700 (7.80)

X L1 = 6.142 (-1.18) X L2 = 6.158 (-0.92) X L3 = 6.208 (-0.11)
X L4 = 6.217 (0.02) X L5 = 6.225 (0.16) X L6 = 6.342 (2.03)

X M1 = 6.133 (-1.32) X M2 = 6.242 (0.42) X M3 = 6.217 (0.02)
X M4 = 6.200 (-0.25) X M5 = 6.175 (-0.65) X M6 = 6.325 (1.77)

Traitements	$\bar{x}$
Temoin	4,9
8T - 30%	6,4
8T - 50%	6,1
12T - 30%	6,0
12T - 50%	6,4
16T - 30%	6,6
16T - 50%	5,8

date :84B parametre :PHKCL1B unite : -

DONNEES :

DDL = 20 NI = 12 SE = 0.068

4 T = 5.708
8 T = 6.325
12 T = 6.612

3 - ANALYSE DE LA VARIANCE

RESULTATS :

	1 4 T	2 8 T	3 12 T
1 4 T		++	++
2 8 T			+
3 12 T			

CRITERES RETENUS	DISPOSITIFS EXPERIMENTAUX CONSIDERES		
	Blocs pris sur les lignes	Blocs pris sur les colonnes	Carre latin
VARIANCES RESIDUELLES			
VR1 (cv1%)	6.44056E-02 (4.1)	6.60722E-02 (4.1)	6.77222E-02 (4.2)
VR2 (cv2%)	7.61389E-02 (4.4)	1.04472E-01 (5.2)	
VR3 (cv3%)	7.22722E-02 (4.3)	6.66056E-02 (4.2)	
HOMOGENEITE DES V.R.			
KI 2 DE BARTLETT	9.31481E-02	5.00577E-01	
PROBABILITE DU KI 2	0.00000	0.00000	
F OBSERVES ET PROBABILITES			
- AMENDEMENT	3.280 (0.921)	3.197 (0.918)	3.119 (0.911)
- DOSE	79.524 (1.000)	77.518 (1.000)	75.630 (1.000)
- AMENDEMENT*DOSE	0.278 (0.237)	0.271 (0.232)	0.265 (0.227)
- SUBSIDIAIRE	0.002 (0.033)	0.001 (0.029)	
- AMENDEMENT*SUBSIDIAIRE	2.354 (0.866)	2.554 (0.881)	
- DOSE*SUBSIDIAIRE	0.544 (0.408)	0.590 (0.433)	
- AMENDEM*DOSE*SUBSID	0.405 (0.324)	0.440 (0.346)	
F OBSERVES ET PROBABILITES SI LES V.R. SONT HOMOGENES			
- AMENDEMENT	3.039 (0.916)	3.010 (0.915)	
- DOSE	73.682 (1.000)	72.982 (1.000)	
- AMENDEMENT*DOSE	0.258 (0.223)	0.255 (0.221)	
- SUBSIDIAIRE	0.002 (0.037)	0.002 (0.036)	
- AMENDEMENT*SUBSIDIAIRE	2.448 (0.880)	2.424 (0.878)	
- DOSE*SUBSIDIAIRE	0.565 (0.423)	0.560 (0.420)	
- AMENDEM*DOSE*SUBSID	0.422 (0.336)	0.418 (0.333)	

PRET
0port 01

4 - CORRELATIONS RESIDUELLES.

(établies sur les résidus des analyses de variance effectuées en prenant comme modèle linéaire d'analyse de variance celui du"bloc à parcelles subdivisées", les blocs étant choisis sur les lignes).

Les informations figurant dans les colonnes des listings sont les suivantes :

. colonne 1 : sigles des variables X et U correlées (se reporter à l'annexe 1 pour la signification des sigles) ;

. colonnes 2 et 3 (NORMU et NORMX) : "NON" pour non-normale, "IMP" pour non examinée (trop petit nombre de résidus) ;

. colonnes 4 et 5 (LINUX et LINXU) : valeurs des F de non-linéarité des régressions de U sur X et de X sur U, et probabilité correspondantes ;

. colonnes 6 et 7 (RP CORUX et RP CORXU) : valeurs des rapports de corrélation, de leurs F de signification et de la probabilité correspondante de ces F lorsque la non-linéarité est significative ;

. colonne 8 (COR) : valeur du coefficient de corrélation entre X et U. Les valeurs de R_1, R_2, R_3 et R_4 au seuil $\alpha + 0,05$ sont les suivantes :

pour R_1 et R_3 à 23ddl : $r_1 = 0,3976$
pour R_2 à 3ddl : $r_2 = 0,8783$
pour R_4 à 49ddl : $r_4 = 0,2761$

. colonnes 9 et 10 (REGUX et REGXU) : coefficient de régression de U sur X et de X sur U ;

. colonne 11 (CORC > 0) : valeur de $t = (r/\sqrt{1-r^2}).\sqrt{n-2}$ et probabilité correspondante.

ACVHM/TAMOA-CORRELATIONS SIMPLES

SUR RESIDUS:1ER,2EME,3EME NIVEAU ET RESIDU MOYEN

NOMS VARIABLES		NORMU	NORMX	LINUX	LINXU	RPCORUX	RPCORXU	COR	REGUX	REGXU	COR<>0
CATF-CO-20											
	R 1	NON	NON	F=1.73E-01 (0.157)	F=1.73E-01 (0.157)			-.18E-01	-.23E-01	-.13E-01	8.47E-02 (0.533)
	R 2	IMP	IMP	IMP	IMP			2.81E-01	4.27E-01	1.85E-01	5.00E-01 (0.674)
	R 3	-	-	F=2.44E-02 (0.023)	F=2.25E-02 (0.021)			-.55E-01	-.66E-01	-.46E-01	2.62E-01 (0.602)
	R 4	NON	NON	F=4.53E-03 (0.000)	F=7.05E-04 (0.000)			-.89E-02	-.11E-01	-.70E-02	6.51E-02 (0.526)
CATF-NO-20											
	R 1	NON	NON	F=3.00E-01 (0.252)	F=7.99E+01 (1.000)	2.93 F= 0.222 (0.119)	3.23 F= 0.245 (0.135)	-.19E+00	-.46E-01	-.79E+00	9.33E-01 (0.820)
	R 2	IMP	IMP	IMP	IMP			9.84E-01	2.38E-01	4.08E+00	4.20E+00 (0.988)
	R 3	-	-	F=4.56E-01 (0.355)	F=1.17E+02 (1.000)	4.38 F= 0.336 (0.198)	3.40 F= 0.258 (0.144)	-.20E+00	-.46E-01	-.85E+00	9.60E-01 (0.827)
	R 4	NON	NON	F=7.10E-02 (0.006)	F=1.46E+01 (1.000)	0.79 F= 0.065 (0.002)	0.55 F= 0.045 (0.001)	-.75E-01	-.18E-01	-.31E+00	5.46E-01 (0.706)

CATF-C/NO-20												
	R 1	NON	-	F=5.46E+02 (1.000)	F=2.47E+00 (0.894)	3.03 F= 0.229 (0.124)	18.40 F= 1.653 (0.795)	1.42E-01	1.08E+00	1.86E-02	6.85E-01 (0.750)
	R 2	IMP	IMP	IMP	IMP			5.10E-01	4.29E+00	6.05E-02	9.74E-01 (0.799)
	R 3	-	-	F=7.01E+00 (0.995)	F=1.46E-01 (0.135)	0.05 F= 0.004 (0.001)	1.31 F= 0.097 (0.040)	-.18E-01	-.12E+00	-.25E-02	8.50E-02 (0.533)
	R 4	NON	NON	F=2.85E+02 (1.000)	F=1.91E+00 (0.891)	0.87 F= 0.072 (0.003)	16.33 F= 1.594 (0.832)	1.02E-01	7.53E-01	1.37E-02	7.42E-01 (0.769)
CATF-PAO											
	R 1	NON	NON	F=8.07E-02 (0.078)	F=1.62E+00 (0.780)			1.57E-02	3.45E-03	7.19E-02	7.55E-02 (0.530)
	R 2	IMP	IMP	IMP	IMP			4.60E-01	1.03E-01	2.05E+00	8.62E-01 (0.774)
	R 3	-	-	F=1.08E-01 (0.102)	F=8.38E+00 (0.998)	1.01 F= 0.075 (0.028)	1.53 F= 0.114 (0.050)	-.47E-01	-.10E-01	-.22E+00	2.25E-01 (0.588)
	R 4	NON	NON	F=1.32E-04 (0.000)	F=4.03E+00 (0.996)	0.00 F= 0.000 (0.000)	0.83 F= 0.068 (0.002)	3.30E-02	7.22E-03	1.51E-01	2.40E-01 (0.594)
CATF-PT											
	R 1	NON	-	F=1.55E+02 (1.000)	F=7.91E-01 (0.470)	3.37 F= 0.255 (0.143)	6.98 F= 0.550 (0.343)	-.21E+00	-.99E+00	-.47E-01	1.05E+00 (0.847)
	R 2	IMP	IMP	IMP	IMP			4.07E-01	2.25E+00	7.34E-02	7.48E-01 (0.746)
	R 3	-	-	F=7.67E+01 (1.000)	F=1.20E-01 (0.113)	2.38 F= 0.178 (0.090)	1.17 F= 0.087 (0.034)	-.17E+00	-.71E+00	-.41E-01	8.27E-01 (0.792)
	R 4	NON	NON	F=6.83E+01 (1.000)	F=5.89E-01 (0.289)	1.90 F= 0.159 (0.015)	5.84 F= 0.507 (0.198)	-.14E+00	-.63E+00	-.32E-01	1.04E+00 (0.848)
CATF-CAO-20											
	R 1	NON	-	F=2.77E-01 (0.236)	F=1.19E+02 (1.000)	2.68 F= 0.202 (0.106)	4.51 F= 0.346 (0.206)	-.18E+00	-.40E-01	-.83E+00	8.81E-01 (0.806)
	R 2	IMP	IMP	IMP	IMP			1.97E-02	5.21E-03	7.48E-02	3.42E-02 (0.513)
	R 3	-	-	F=3.39E-01 (0.279)	F=2.16E+02 (1.000)	3.21 F= 0.243 (0.134)	4.16 F= 0.318 (0.186)	-.19E+00	-.36E-01	-.96E+00	9.03E-01 (0.812)
	R 4	NON	NON	F=2.75E-01 (0.076)	F=1.27E+02 (1.000)	2.97 F= 0.250 (0.044)	3.88 F= 0.330 (0.082)	-.17E+00	-.35E-01	-.79E+00	1.22E+00 (0.887)

CATF-MGO-20											
	R 1	NON	-	F=5.14E+01 (1.000)	F=9.41E-01 (0.408)	5.76 F= 0.448 (0.275)	7.97 F= 0.635 (0.396)	-.11E+00	-.53E+00	-.22E-01	5.15E-01 (0.694)
	R 2	IMP	IMP	IMP	IMP			2.34E-01	1.12E+00	4.89E-02	4.13E-01 (0.646)
	R 3	-	-	F=4.05E+01 (1.000)	F=1.11E-01 (0.105)	0.66 F= 0.049 (0.015)	1.10 F= 0.081 (0.031)	1.06E-01	4.76E-01	2.38E-02	5.12E-01 (0.693)
	R 4	NON	NON	F=3.11E+00 (0.984)	F=4.09E-02 (0.002)	0.00 F= 0.000 (0.000)	0.42 F= 0.035 (0.001)	2.61E-02	1.23E-01	5.53E-03	1.90E-01 (0.575)
CATF-KO-20											
	R 1	NON	NON	F=3.28E-01 (0.272)	F=8.93E+01 (1.000)	2.97 F= 0.225 (0.122)	3.90 F= 0.298 (0.172)	-.13E+00	-.27E-01	-.67E+00	6.48E-01 (0.738)
	R 2	IMP	IMP	IMP	IMP			1.96E-01	3.89E-02	9.88E-01	3.44E-01 (0.623)
	R 3	-	-	F=6.20E-01 (0.449)	F=4.57E+02 (1.000)	5.75 F= 0.447 (0.275)	3.76 F= 0.286 (0.164)	2.62E-01	5.11E-02	1.35E+00	1.29E+00 (0.895)
	R 4	NON	NON	F=4.97E-02 (0.003)	F=3.45E+01 (1.000)	0.55 F= 0.045 (0.001)	0.14 F= 0.012 (0.000)	7.52E-02	1.48E-02	3.82E-01	5.48E-01 (0.707)
CATF-NAO-20											
	R 1	NON	-	F=1.08E+02 (1.000)	F=4.90E-01 (0.376)	3.40 F= 0.258 (0.144)	4.40 F= 0.337 (0.199)	-.12E+00	-.66E+00	-.21E-01	5.65E-01 (0.711)
	R 2	IMP	IMP	IMP	IMP			8.61E-01	5.51E+00	1.35E-01	2.25E+00 (0.945)
	R 3	-	-	F=3.15E+01 (1.000)	F=1.38E+00 (0.729)	0.58 F= 0.043 (0.013)	11.28 F= 0.933 (0.444)	8.40E-02	3.98E-01	1.77E-02	4.04E-01 (0.655)
	R 4	NON	NON	F=2.67E+01 (1.000)	F=1.92E+00 (0.892)	0.32 F= 0.026 (0.000)	16.36 F= 1.598 (0.833)	6.35E-02	3.33E-01	1.21E-02	4.63E-01 (0.677)
CATF-SBE											
	R 1	NON	NON	F=2.08E+01 (1.000)	F=9.02E+03 (1.000)	67.76 F= 15.412 (1.000)	72.40 F= 19.239 (1.000)	9.61E-01	2.19E-01	4.21E+00	9.41E+00 (1.000)
	R 2	IMP	IMP	IMP	IMP			9.80E-01	2.58E-01	3.72E+00	3.96E+00 (0.986)
	R 3	-	-	F=4.16E+01 (1.000)	F=2.98E+04 (1.000)	80.50 F= 30.267 (1.000)	85.45 F= 43.064 (1.000)	9.66E-01	2.00E-01	4.65E+00	9.72E+00 (1.000)
	R 4	NON	NON	F=9.43E+01 (1.000)	F=5.86E+04 (1.000)	91.39 F= 86.713 (1.000)	94.35 F=136.298 (1.000)	9.63E-01	2.13E-01	4.36E+00	1.44E+01 (1.000)

CATF-HPFPO-20											
	R 1	NON	-	F=4.74E-01 (0.366)	F=5.92E+01 (1.000)	4.83 F= 0.372 (0.223)	6.27 F= 0.490 (0.304)	-.25E+00	-.73E-01	-.83E+00	1.20E+00 (0.880)
	R 2	IMP	IMP	IMP	IMP			9.95E-01	4.03E-01	2.45E+00	5.73E+00 (0.993)
	R 3	-	-	F=1.85E-01 (0.166)	F=4.56E+01 (1.000)	1.91 F= 0.143 (0.068)	4.19 F= 0.321 (0.188)	-.16E+00	-.42E-01	-.62E+00	7.81E-01 (0.778)
	R 4	NON	NON	F=1.02E-01 (0.011)	F=1.58E+01 (1.000)	1.22 F= 0.101 (0.005)	1.97 F= 0.164 (0.016)	-.11E+00	-.32E-01	-.40E+00	8.31E-01 (0.795)
CATF-HCCO-20											
	R 1	NON	-	F=4.23E-01 (0.335)	F=3.42E-02 (0.033)			2.70E-02	4.52E-02	1.61E-02	1.30E-01 (0.551)
	R 2	IMP	IMP	IMP	IMP			9.53E-02	1.52E-01	5.98E-02	1.65E-01 (0.560)
	R 3	-	-	F=1.56E-02 (0.015)	F=1.62E-01 (0.148)			-.36E-01	-.55E-01	-.23E-01	1.71E-01 (0.567)
	R 4	NON	NON	F=1.46E-04 (0.000)	F=2.46E-02 (0.001)			5.50E-03	8.81E-03	3.43E-03	4.00E-02 (0.516)
CATF-RUO-20											
	R 1	NON	NON	F=9.07E-02 (0.087)	F=3.34E-01 (0.276)			1.39E-02	3.55E-03	5.45E-02	6.67E-02 (0.526)
	R 2	IMP	IMP	IMP	IMP			2.47E-01	6.51E-02	9.41E-01	4.38E-01 (0.654)
	R 3	-	-	F=4.62E-02 (0.045)	F=6.03E+00 (0.992)	0.45 F= 0.033 (0.009)	0.31 F= 0.023 (0.005)	-.55E-01	-.14E-01	-.22E+00	2.64E-01 (0.603)
	R 4	NON	NON	F=4.34E-03 (0.000)	F=9.82E-02 (0.010)			7.00E-03	1.79E-03	2.74E-02	5.10E-02 (0.520)
CATF-CA/MGO-20											
	R 1	NON	-	F=7.90E-01 (0.470)	F=4.36E-02 (0.042)			-.30E-01	-.60E-01	-.15E-01	1.44E-01 (0.557)
	R 2	IMP	IMP	IMP	IMP			-.19E+00	-.31E+00	-.12E+00	3.34E-01 (0.620)
	R 3	-	-	F=5.38E-02 (0.052)	F=1.81E-01 (0.164)			-.17E-01	-.29E-01	-.99E-02	8.07E-02 (0.532)
	R 4	NON	NON	F=1.04E-01 (0.011)	F=1.78E-01 (0.032)			-.42E-01	-.76E-01	-.23E-01	3.05E-01 (0.619)

CATF-RAPO-20										
	R 1	NON	NON	F=2.48E-02 (0.024)	F=2.42E-03 (0.002)			-.19E+00	-.21E+00	-.18E+00	9.44E-01 (0.822)
	R 2	IMP	IMP	IMP	IMP			7.43E-02	8.58E-02	6.43E-02	1.29E-01 (0.547)
	R 3	-	-	F=1.12E-02 (0.010)	F=3.09E-04 (0.001)			2.21E-01	2.25E-01	2.16E-01	1.08E+00 (0.854)
	R 4	NON	NON	F=1.33E-04 (0.000)	F=4.55E-04 (0.000)			1.84E-02	1.94E-02	1.74E-02	1.34E-01 (0.553)
MGTF-CO-20											
	R 1	NON	NON	F=3.15E-01 (0.263)	F=5.03E-01 (0.383)			-.26E-02	-.15E-01	-.45E-03	1.26E-02 (0.505)
	R 2	IMP	IMP	IMP	IMP			-.71E-01	-.47E+00	-.11E-01	1.23E-01 (0.545)
	R 3	-	-	F=6.89E-02 (0.067)	F=1.19E-02 (0.011)			-.15E-02	-.83E-02	-.28E-03	7.30E-03 (0.503)
	R 4	NON	NON	F=6.62E-01 (0.343)	F=1.22E-03 (0.000)			-.79E-02	-.45E-01	-.14E-02	5.75E-02 (0.523)
MGTF-NO-20											
	R 1	NON	NON	F=1.31E-01 (0.122)	F=4.94E-02 (0.048)			-.37E-01	-.40E-01	-.35E-01	1.78E-01 (0.570)
	R 2	IMP	IMP	IMP	IMP			3.72E-01	3.96E-01	3.49E-01	6.77E-01 (0.726)
	R 3	-	-	F=2.44E-02 (0.023)	F=1.95E-02 (0.018)			-.11E+00	-.11E+00	-100E+00	5.12E-01 (0.693)
	R 4	NON	NON	F=2.96E-01 (0.088)	F=5.49E-02 (0.004)			-.28E-01	-.30E-01	-.26E-01	2.01E-01 (0.579)
MGTF-C/NO-20											
	R 1	NON	-	F=6.74E+05 (1.000)	F=1.55E+00 (0.766)	6.10 F= 0.477 (0.295)	12.33 F= 1.032 (0.601)	-.25E+00	-.83E+01	-.73E-02	1.20E+00 (0.879)
	R 2	IMP	IMP	IMP	IMP			8.93E-01	3.31E+01	2.41E-02	2.49E+00 (0.956)
	R 3	-	-	F=1.38E+04 (1.000)	F=4.84E-01 (0.372)	0.47 F= 0.035 (0.009)	4.21 F= 0.323 (0.189)	3.65E-02	1.17E+00	1.14E-03	1.75E-01 (0.569)
	R 4	NON	NON	F=1.53E+03 (1.000)	F=3.98E-01 (0.151)	0.01 F= 0.001 (0.000)	3.90 F= 0.331 (0.083)	-.12E-01	-.38E+00	-.35E-03	8.39E-02 (0.533)

MGTF-PAO												
	R 1	NON	NON	F=7.30E-01 (0.497)	F=7.21E-03 (0.007)			-.78E-02	-.76E-02	-.80E-02	3.74E-02 (0.515)
	R 2	IMP	IMP	IMP	IMP			1.32E-02	1.30E-02	1.33E-02	2.28E-02 (0.508)
	R 3	-	-	F=1.11E-01 (0.105)	F=1.30E-02 (0.012)			4.74E-02	4.71E-02	4.77E-02	2.27E-01 (0.589)
	R 4	NON	NON	F=1.13E-03 (0.000)	F=1.54E-03 (0.000)			1.90E-02	1.86E-02	1.93E-02	1.38E-01 (0.555)
MGTF-PT												
	R 1	NON	-	F=1.13E+05 (1.000)	F=6.43E-01 (0.460)	5.29 F= 0.410 (0.249)	5.55 F= 0.431 (0.264)	-.28E+00	-.57E+01	-.14E-01	1.37E+00 (0.908)
	R 2	IMP	IMP	IMP	IMP			2.57E-01	6.27E+00	1.05E-02	4.54E-01 (0.660)
	R 3	-	-	F=5.46E+04 (1.000)	F=2.12E-01 (0.188)	4.29 F= 0.329 (0.194)	1.91 F= 0.143 (0.067)	2.04E-01	3.88E+00	1.08E-02	9.95E-01 (0.835)
	R 4	NON	NON	F=2.75E+01 (1.000)	F=3.09E-02 (0.001)	0.65 F= 0.053 (0.002)	0.31 F= 0.026 (0.000)	-.42E-02	-.85E-01	-.21E-03	3.08E-02 (0.512)
MGTF-CAO-20												
	R 1	NON	-	F=8.97E-01 (0.425)	F=4.76E-02 (0.046)			-.51E-01	-.50E-01	-.53E-01	2.47E-01 (0.596)
	R 2	IMP	IMP	IMP	IMP			4.24E-01	4.94E-01	3.65E-01	7.85E-01 (0.755)
	R 3	-	-	F=8.07E-02 (0.078)	F=4.65E-02 (0.045)			-.12E+00	-.10E+00	-.13E+00	5.55E-01 (0.708)
	R 4	NON	NON	F=7.37E-02 (0.006)	F=3.84E-02 (0.002)			-.44E-01	-.41E-01	-.46E-01	3.18E-01 (0.624)
MGTF-MGO-20												
	R 1	NON	-	F=1.94E+06 (1.000)	F=3.32E+01 (1.000)	42.75 F= 5.476 (0.994)	75.16 F= 22.185 (1.000)	7.71E-01	1.69E+01	3.51E-02	4.90E+00 (1.000)
	R 2	IMP	IMP	IMP	IMP			9.07E-01	1.91E+01	4.31E-02	2.62E+00 (0.960)
	R 3	-	-	F=2.11E+06 (1.000)	F=9.56E+00 (0.999)	54.63 F= 8.832 (0.999)	46.63 F= 6.406 (0.997)	7.56E-01	1.54E+01	3.70E-02	4.73E+00 (1.000)
	R 4	NON	NON	F=2.75E+06 (1.000)	F=4.36E+01 (1.000)	59.01 F= 11.758 (1.000)	81.70 F= 36.472 (1.000)	7.77E-01	1.64E+01	3.67E-02	7.55E+00 (1.000)

MGTF-KO-20											
	R 1	NON	NON	F=7.28E-02 (0.071)	F=7.11E-02 (0.069)			-.22E+00	-.19E+00	-.24E+00	1.05E+00 (0.847)
	R 2	IMP	IMP	IMP	IMP			9.91E-01	8.66E-01	1.13E+00	4.63E+00 (0.991)
	R 3	-	-	F=1.68E-02 (0.016)	F=5.18E-02 (0.050)			-.18E+00	-.16E+00	-.21E+00	8.96E-01 (0.810)
	R 4	NON	NON	F=8.67E-03 (0.000)	F=1.39E-02 (0.001)			-.80E-01	-.71E-01	-.91E-01	5.85E-01 (0.719)
MGTF-NAO-20											
	R 1	NON	-	F=2.01E+03 (1.000)	F=2.07E-01 (0.183)	11.78 F= 0.979 (0.422)	1.84 F= 0.138 (0.064)	2.37E-02	5.94E-01	9.45E-04	1.14E-01 (0.545)
	R 2	IMP	IMP	IMP	IMP			5.36E-01	1.51E+01	1.90E-02	1.04E+00 (0.812)
	R 3	-	-	F=2.03E+05 (1.000)	F=4.87E-01 (0.374)	8.04 F= 0.641 (0.400)	4.27 F= 0.327 (0.192)	2.97E-01	6.43E+00	1.37E-02	1.47E+00 (0.922)
	R 4	NON	NON	F=1.19E+05 (1.000)	F=2.80E+00 (0.974)	2.56 F= 0.215 (0.031)	22.24 F= 2.335 (0.954)	2.01E-01	4.72E+00	8.53E-03	1.48E+00 (0.928)
MGTF-SBE											
	R 1	NON	NON	F=1.81E-02 (0.017)	F=2.06E-02 (0.019)			-.16E-01	-.16E-01	-.16E-01	7.62E-02 (0.530)
	R 2	IMP	IMP	IMP	IMP			4.07E-01	4.72E-01	3.51E-01	7.48E-01 (0.746)
	R 3	-	-	F=3.90E-02 (0.038)	F=5.59E-02 (0.054)			-.12E+00	-.12E+00	-.13E+00	5.97E-01 (0.722)
	R 4	NON	NON	F=5.61E-03 (0.000)	F=6.68E-02 (0.005)			-.31E-01	-.31E-01	-.31E-01	2.26E-01 (0.589)
MGTF-HPFPO-20											
	R 1	NON	-	F=2.69E-03 (0.003)	F=2.39E-03 (0.002)			3.79E-02	5.00E-02	2.87E-02	1.82E-01 (0.571)
	R 2	IMP	IMP	IMP	IMP			2.28E-01	4.08E-01	1.28E-01	4.03E-01 (0.643)
	R 3	-	-	F=1.81E-02 (0.017)	F=1.07E-02 (0.010)			-.23E-01	-.27E-01	-.20E-01	1.11E-01 (0.544)
	R 4	NON	NON	F=4.73E-03 (0.000)	F=2.31E-03 (0.000)			2.13E-02	2.72E-02	1.67E-02	1.55E-01 (0.561)

MGTF-HCCO-20											
	R 1	NON	-	F=1.34E+01 (1.000)	F=3.23E-01 (0.269)	2.33 F= 0.175 (0.088)	2.86 F= 0.216 (0.116)	-.23E-01	-.17E+00	-.31E-02	1.12E-01 (0.544)
	R 2	IMP	IMP	IMP	IMP			-.25E+00	-.17E+01	-.35E-01	4.41E-01 (0.655)
	R 3	-	-	F=2.74E+02 (1.000)	F=2.47E-01 (0.214)	1.68 F= 0.125 (0.056)	2.24 F= 0.168 (0.084)	1.10E-01	7.70E-01	1.57E-02	5.28E-01 (0.699)
	R 4	NON	NON	F=5.67E+00 (1.000)	F=1.10E-02 (0.000)	0.29 F= 0.024 (0.000)	0.11 F= 0.009 (0.000)	1.54E-02	1.11E-01	2.14E-03	1.12E-01 (0.544)
MGTF-RUO-20											
	R 1	NON	NON	F=1.56E-01 (0.143)	F=3.38E-04 (0.001)			3.22E-02	3.64E-02	2.84E-02	1.54E-01 (0.561)
	R 2	IMP	IMP	IMP	IMP			-.72E-01	-.83E-01	-.62E-01	1.25E-01 (0.546)
	R 3	-	-	F=1.92E-02 (0.018)	F=3.98E-03 (0.004)			1.13E-02	1.31E-02	9.71E-03	5.41E-02 (0.521)
	R 4	NON	NON	F=1.01E-02 (0.000)	F=1.67E-03 (0.000)			1.26E-02	1.44E-02	1.10E-02	9.15E-02 (0.536)
MGTF-CA/MGO-20											
	R 1	NON	-	F=4.77E-01 (0.368)	F=3.70E-01 (0.300)			-.30E-02	-.26E-01	-.34E-03	1.44E-02 (0.506)
	R 2	IMP	IMP	IMP	IMP			8.41E-02	6.13E-01	1.15E-02	1.46E-01 (0.553)
	R 3	-	-	F=1.03E+02 (1.000)	F=7.82E-02 (0.075)	0.38 F= 0.028 (0.007)	0.72 F= 0.053 (0.017)	-.55E-01	-.43E+00	-.71E-02	2.65E-01 (0.603)
	R 4	NON	NON	F=1.32E+01 (1.000)	F=2.35E-01 (0.056)	0.37 F= 0.030 (0.001)	2.35 F= 0.196 (0.025)	-.18E-01	-.15E+00	-.22E-02	1.31E-01 (0.552)
MGTF-RAPO-20											
	R 1	NON	NON	F=8.98E-01 (0.425)	F=6.64E-05 (0.000)			-.83E-02	-.39E-01	-.17E-02	3.96E-02 (0.516)
	R 2	IMP	IMP	IMP	IMP			-.30E+00	-.15E+01	-.59E-01	5.32E-01 (0.684)
	R 3	-	-	F=3.32E+01 (1.000)	F=5.93E-02 (0.058)	1.79 F= 0.134 (0.062)	0.59 F= 0.044 (0.013)	8.92E-02	4.16E-01	1.91E-02	4.29E-01 (0.664)
	R 4	NON	NON	F=4.99E-01 (0.223)	F=1.07E-04 (0.000)			9.74E-03	4.60E-02	2.06E-03	7.09E-02 (0.528)

NOMS VARIABLES		NORMU	NORMX	LINUX	LINXU	RPCORUX	RPCORXU	COR	REGUX	REGXU	COR<>0
NTF-C0-20											
	R 1	NON	NON	F=2.27E-01 (0.199)	F=2.54E-02 (0.024)			-.25E+00	-.30E+00	-.21E+00	1.25E+00 (0.887)
	R 2	IMP	IMP	IMP	IMP			9.96E-01	1.30E+00	7.64E-01	5.46E+00 (0.994)
	R 3	-	-	F=4.85E-02 (0.047)	F=8.49E-02 (0.082)			-.16E+00	-.18E+00	-.14E+00	7.71E-01 (0.776)
	R 4	NON	NON	F=2.06E-02 (0.001)	F=1.86E-02 (0.001)			-.11E+00	-.13E+00	-.90E-01	7.83E-01 (0.781)
P205TF-C0-20											
	R 1	NON	NON	F=4.02E+01 (1.000)	F=1.59E+00 (0.776)	1.33 F= 0.099 (0.041)	12.73 F= 1.069 (0.617)	9.28E-02	4.66E-01	1.85E-02	4.46E-01 (0.670)
	R 2	IMP	IMP	IMP	IMP			2.02E-01	1.17E+00	3.50E-02	3.55E-01 (0.627)
	R 3	-	-	F=6.79E+01 (1.000)	F=1.39E-01 (0.129)	1.18 F= 0.088 (0.035)	1.33 F= 0.099 (0.041)	-.12E+00	-.59E+00	-.27E-01	6.01E-01 (0.723)
	R 4	NON	NON	F=1.45E-02 (0.001)	F=2.15E-03 (0.000)			-.13E-02	-.63E-02	-.26E-03	9.28E-03 (0.504)
KTF-C0-20											
	R 1	NON	NON	F=1.83E-01 (0.165)	F=2.05E+00 (0.849)			9.12E-02	1.06E-01	7.87E-02	4.38E-01 (0.667)
	R 2	IMP	IMP	IMP	IMP			3.39E-01	4.56E-01	2.52E-01	6.11E-01 (0.708)
	R 3	-	-	F=4.00E-03 (0.004)	F=8.05E-01 (0.463)			7.38E-03	7.72E-03	7.06E-03	3.54E-02 (0.514)
	R 4	NON	NON	F=4.67E-04 (0.000)	F=2.04E-02 (0.001)			7.37E-02	8.25E-02	6.59E-02	5.38E-01 (0.703)
QCATF-C0-20											
	R 1	NON	NON	F=5.61E+02 (1.000)	F=3.85E-01 (0.310)	4.80 F= 0.370 (0.222)	3.57 F= 0.271 (0.154)	-.23E+00	-.14E+01	-.39E-01	1.14E+00 (0.866)
	R 2	IMP	IMP	IMP	IMP			9.76E-01	6.49E+00	1.47E-01	3.81E+00 (0.984)
	R 3	-	-	F=2.65E+02 (1.000)	F=3.29E-01 (0.273)	3.04 F= 0.230 (0.125)	3.08 F= 0.233 (0.127)	-.18E+00	-.97E+00	-.32E-01	8.60E-01 (0.801)
	R 4	NON	NON	F=1.11E+02 (1.000)	F=9.57E-02 (0.010)	1.32 F= 0.109 (0.006)	1.03 F= 0.085 (0.004)	-.10E+00	-.61E+00	-.18E-01	7.65E-01 (0.776)

QMGTF-C0-20											
	R 1	NON	NON	F=4.35E-02 (0.042)	F=1.53E-01 (0.140)			5.02E-02	5.65E-02	4.47E-02	2.41E-01 (0.594)
	R 2	IMP	IMP	IMP	IMP			-.12E+00	-.15E+00	-.10E+00	2.14E-01 (0.578)
	R 3	-	-	F=9.34E-03 (0.009)	F=1.84E-02 (0.017)			7.46E-02	7.95E-02	7.01E-02	3.59E-01 (0.638)
	R 4	NON	NON	F=1.13E-02 (0.000)	F=4.69E-04 (0.000)			4.83E-02	5.31E-02	4.39E-02	3.52E-01 (0.637)
QNTF-C0-20											
	R 1	NON	NON	F=2.23E+01 (1.000)	F=1.71E+00 (0.797)	0.29 F= 0.021 (0.005)	13.47 F= 1.142 (0.646)	6.11E-02	3.23E-01	1.15E-02	2.93E-01 (0.614)
	R 2	IMP	IMP	IMP	IMP			5.12E-01	3.15E+00	8.34E-02	9.80E-01 (0.800)
	R 3	-	-	F=4.94E+01 (1.000)	F=5.27E-02 (0.051)	1.23 F= 0.091 (0.037)	0.53 F= 0.039 (0.011)	-.96E-01	-.47E+00	-.20E-01	4.63E-01 (0.676)
	R 4	NON	NON	F=4.29E+00 (0.997)	F=8.75E-04 (0.000)	0.92 F= 0.076 (0.003)	0.01 F= 0.001 (0.000)	2.56E-02	1.33E-01	4.93E-03	1.86E-01 (0.574)
QPTF-C0-20											
	R 1	NON	NON	F=6.00E-02 (0.058)	F=1.49E-01 (0.137)			9.25E-02	1.08E-01	7.91E-02	4.45E-01 (0.670)
	R 2	IMP	IMP	IMP	IMP			2.84E-01	3.90E-01	2.07E-01	5.06E-01 (0.676)
	R 3	-	-	F=1.12E-01 (0.106)	F=1.43E-01 (0.132)			1.11E-02	1.18E-02	1.05E-02	5.33E-02 (0.521)
	R 4	NON	NON	F=4.03E-02 (0.002)	F=1.12E-03 (0.000)			7.13E-02	8.08E-02	6.29E-02	5.20E-01 (0.697)
QKTF-C0-20											
	R 1	NON	NON	F=8.73E+00 (0.998)	F=2.71E-01 (0.232)	0.42 F= 0.031 (0.008)	2.40 F= 0.180 (0.092)	4.70E-02	2.23E-01	9.92E-03	2.26E-01 (0.588)
	R 2	IMP	IMP	IMP	IMP			-.50E-01	-.27E+00	-.91E-02	8.65E-02 (0.532)
	R 3	-	-	F=3.85E+00 (0.964)	F=2.28E-02 (0.022)	0.22 F= 0.016 (0.003)	0.21 F= 0.016 (0.003)	3.43E-02	1.52E-01	7.70E-03	1.64E-01 (0.565)
	R 4	NON	NON	F=4.35E+00 (0.997)	F=1.04E-02 (0.000)	0.05 F= 0.004 (0.000)	0.12 F= 0.009 (0.000)	3.25E-02	1.51E-01	6.98E-03	2.37E-01 (0.593)

MG-GR A0-20											
	R 1	-	NON	F=4.99E-01 (0.381)	F=1.31E+00 (0.710)			-.31E-01	-.98E-02	-.98E-01	1.49E-01 (0.558)
	R 2	IMP	IMP	IMP	IMP			6.85E-01	1.33E-01	3.52E+00	1.45E+00 (0.879)
	R 3	-	-	F=4.34E-01 (0.341)	F=3.62E-02 (0.035)			3.12E-04	1.09E-04	8.89E-04	1.50E-03 (0.501)
	R 4	NON	NON	F=3.75E-02 (0.002)	F=2.30E-01 (0.054)			2.04E-02	6.65E-03	6.24E-02	1.48E-01 (0.559)
N-GR A0-20											
	R 1	-	NON	F=5.07E-01 (0.386)	F=1.36E+01 (1.000)	4.75 F= 0.366 (0.219)	1.27 F= 0.094 (0.038)	-.13E+00	-.41E-01	-.43E+00	6.43E-01 (0.737)
	R 2	IMP	IMP	IMP	IMP			2.21E-01	8.13E-02	6.01E-01	3.89E-01 (0.638)
	R 3	-	-	F=2.97E-01 (0.250)	F=2.23E+01 (1.000)	2.78 F= 0.210 (0.112)	3.10 F= 0.235 (0.129)	-.16E+00	-.49E-01	-.52E+00	7.74E-01 (0.777)
	R 4	NON	NON	F=2.45E-01 (0.060)	F=1.02E+01 (1.000)	2.53 F= 0.212 (0.030)	1.04 F= 0.086 (0.004)	-.11E+00	-.35E-01	-.36E+00	8.21E-01 (0.792)
P-GR-A0-20											
	R 1	NON	NON	F=5.63E+02 (1.000)	F=2.61E-01 (0.225)	2.31 F= 0.173 (0.087)	2.40 F= 0.180 (0.092)	-.16E+00	-.12E+01	-.22E-01	7.76E-01 (0.777)
	R 2	IMP	IMP	IMP	IMP			-.83E-01	-.64E+00	-.11E-01	1.43E-01 (0.552)
	R 3	-	-	F=6.94E+02 (1.000)	F=3.32E-01 (0.274)	4.26 F= 0.326 (0.192)	3.05 F= 0.231 (0.126)	-.18E+00	-.13E+01	-.27E-01	8.97E-01 (0.810)
	R 4	NON	NON	F=6.32E+02 (1.000)	F=2.75E-01 (0.076)	3.50 F= 0.296 (0.065)	2.83 F= 0.238 (0.039)	-.17E+00	-.12E+01	-.23E-01	1.21E+00 (0.885)
K-GR A0-20											
	R 1	-	NON	F=4.60E+00 (0.979)	F=5.64E+02 (1.000)	30.99 F= 3.294 (0.961)	40.55 F= 5.002 (0.991)	4.49E-01	1.14E-01	1.77E+00	2.32E+00 (0.985)
	R 2	IMP	IMP	IMP	IMP			-.20E+00	-.34E-01	-.11E+01	3.44E-01 (0.623)
	R 3	-	-	F=1.40E+00 (0.732)	F=1.10E+02 (1.000)	11.92 F= 0.992 (0.416)	9.18 F= 0.741 (0.458)	-.29E+00	-.85E-01	-.10E+01	1.45E+00 (0.919)
	R 4	NON	NON	F=1.44E-01 (0.021)	F=5.22E-01 (0.239)			1.41E-02	3.76E-03	5.26E-02	1.02E-01 (0.541)

QMG-GR A0-20											
	R 1	-	NON	F=3.70E+02 (1.000)	F=1.95E-01 (0.174)	5.88 F= 0.458 (0.282)	1.79 F= 0.134 (0.062)	-.15E+00	-.10E+01	-.24E-01	7.47E-01 (0.769)
	R 2	IMP	IMP	IMP	IMP			3.67E-01	1.98E+00	6.81E-02	6.66E-01 (0.724)
	R 3	-	-	F=7.10E+02 (1.000)	F=4.46E-01 (0.349)	2.31 F= 0.173 (0.087)	4.03 F= 0.308 (0.179)	1.94E-01	1.31E+00	2.88E-02	9.43E-01 (0.822)
	R 4	NON	NON	F=5.73E+01 (1.000)	F=6.40E-02 (0.005)	0.00 F= 0.000 (0.000)	0.67 F= 0.055 (0.002)	5.73E-02	3.76E-01	8.73E-03	4.18E-01 (0.661)
QN-GR A0-20											
	R 1	-	NON	F=1.12E+00 (0.654)	F=1.58E+00 (0.772)			1.45E-01	1.80E-01	1.17E-01	6.99E-01 (0.754)
	R 2	IMP	IMP	IMP	IMP			-.14E+00	-.18E+00	-.11E+00	2.44E-01 (0.589)
	R 3	-	-	F=3.32E-01 (0.275)	F=2.91E-02 (0.028)			-.13E-01	-.16E-01	-.11E-01	6.35E-02 (0.525)
	R 4	NON	NON	F=1.02E-01 (0.011)	F=9.96E-04 (0.000)			4.38E-02	5.39E-02	3.55E-02	3.19E-01 (0.624)
QP-GR-A0-20											
	R 1	NON	NON	F=5.96E+04 (1.000)	F=2.40E+01 (1.000)	68.76 F= 16.139 (1.000)	69.40 F= 16.636 (1.000)	9.52E-01	6.82E+00	1.33E-01	8.86E+00 (1.000)
	R 2	IMP	IMP	IMP	IMP			9.39E-01	7.02E+00	1.25E-01	2.99E+00 (0.971)
	R 3	-	-	F=8.17E+04 (1.000)	F=4.25E+01 (1.000)	81.68 F= 32.701 (1.000)	80.19 F= 29.677 (1.000)	9.52E-01	6.19E+00	1.46E-01	8.89E+00 (1.000)
	R 4	NON	NON	F=2.63E+05 (1.000)	F=9.43E+01 (1.000)	93.15 F=111.066 (1.000)	90.94 F= 81.941 (1.000)	9.49E-01	6.52E+00	1.38E-01	1.33E+01 (1.000)
QK-GR-A0-20											
	R 1	NON	NON	F=1.07E+00 (0.640)	F=1.02E-01 (0.097)			6.46E-02	5.53E-02	7.55E-02	3.10E-01 (0.620)
	R 2	IMP	IMP	IMP	IMP			1.31E-01	1.22E-01	1.40E-01	2.28E-01 (0.583)
	R 3	-	-	F=3.22E-02 (0.031)	F=5.83E-04 (0.001)			-.48E-01	-.41E-01	-.56E-01	2.29E-01 (0.589)
	R 4	NON	NON	F=2.78E-03 (0.000)	F=8.79E-04 (0.000)			1.54E-02	1.33E-02	1.78E-02	1.12E-01 (0.544)

QTMG-A0-20											
	R 1	NON	NON	F=8.00E+00 (0.997)	F=8.23E-01 (0.455)	0.02 F= 0.001 (0.000)	6.96 F= 0.549 (0.342)	2.11E-02	1.49E-01	3.01E-03	1.01E-01 (0.540)
	R 2	IMP	IMP	IMP	IMP			3.82E-01	2.33E+00	6.26E-02	6.97E-01 (0.732)
	R 3	-	-	F=3.66E+01 (1.000)	F=3.39E-02 (0.033)	0.25 F= 0.018 (0.004)	0.31 F= 0.023 (0.005)	-.40E-01	-.28E+00	-.56E-02	1.91E-01 (0.575)
	R 4	NON	NON	F=5.60E+00 (0.999)	F=6.15E-03 (0.000)	0.02 F= 0.002 (0.000)	0.06 F= 0.005 (0.000)	1.59E-02	1.12E-01	2.26E-03	1.16E-01 (0.546)
QTN-90-20											
	R 1	-	NON	F=4.49E-02 (0.044)	F=2.56E-03 (0.002)			8.17E-02	7.63E-02	8.73E-02	3.92E-01 (0.651)
	R 2	IMP	IMP	IMP	IMP			-.24E+00	-.24E+00	-.23E+00	4.22E-01 (0.649)
	R 3	-	-	F=8.27E-02 (0.080)	F=1.97E-02 (0.019)			3.40E-02	3.21E-02	3.59E-02	1.63E-01 (0.564)
	R 4	NON	NON	F=6.34E-03 (0.000)	F=4.09E-05 (0.000)			3.02E-02	2.86E-02	3.19E-02	2.20E-01 (0.587)
QTP-A0-20											
	R 1	NON	NON	F=2.35E+01 (1.000)	F=1.65E-01 (0.151)	1.92 F= 0.143 (0.068)	1.48 F= 0.110 (0.048)	5.89E-02	3.15E-01	1.10E-02	2.83E-01 (0.610)
	R 2	IMP	IMP	IMP	IMP			-.85E-01	-.49E+00	-.15E-01	1.47E-01 (0.554)
	R 3	-	-	F=1.51E+00 (0.758)	F=5.15E-03 (0.005)			1.73E-02	8.59E-02	3.47E-03	8.28E-02 (0.533)
	R 4	NON	NON	F=4.38E+00 (0.998)	F=4.46E-03 (0.000)	0.10 F= 0.008 (0.000)	0.05 F= 0.004 (0.000)	2.63E-02	1.37E-01	5.06E-03	1.92E-01 (0.576)
QTK-A0-20											
	R 1	NON	NON	F=9.33E-01 (0.411)	F=3.08E-01 (0.258)			4.19E-02	4.51E-02	3.90E-02	2.01E-01 (0.579)
	R 2	IMP	IMP	IMP	IMP			-.95E-02	-.11E-01	-.81E-02	1.65E-02 (0.506)
	R 3	-	-	F=4.10E-03 (0.004)	F=2.45E-03 (0.002)			-.44E-02	-.49E-02	-.39E-02	2.11E-02 (0.508)
	R 4	NON	NON	F=2.96E-02 (0.001)	F=8.27E-04 (0.000)			1.43E-02	1.59E-02	1.29E-02	1.04E-01 (0.541)

ACVHM/TAMOA-CORRELATIONS SIMPLES

SUR RESIDUS:1ER,2EME,3EME NIVEAU ET RESIDU MOYEN

NOMS VARIABLES		NORMU	NORMX	LINUX	LINXU	RPCORUX	RPCORXU	COR	REGUX	REGXU	COR<>0
QG-A2											
	R 1	-	NON	F=8.30E-01 (0.453)	F=2.27E-01 (0.199)			7.53E-02	6.90E-02	8.21E-02	3.62E-01 (0.640)
	R 2	IMP	IMP	IMP	IMP			1.40E-01	1.47E-01	1.33E-01	2.43E-01 (0.588)
	R 3	-	-	F=3.34E-02 (0.032)	F=9.33E-02 (0.089)			-.35E-01	-.33E-01	-.38E-01	1.69E-01 (0.567)
	R 4	NON	NON	F=5.07E-03 (0.000)	F=8.08E-04 (0.000)			2.88E-02	2.71E-02	3.06E-02	2.09E-01 (0.583)
QG-LF2											
	R 1	-	NON	F=1.68E-01 (0.153)	F=8.67E+00 (0.998)	1.50 F= 0.112 (0.048)	0.07 F= 0.005 (0.001)	4.98E-02	1.08E-02	2.30E-01	2.39E-01 (0.593)
	R 2	IMP	IMP	IMP	IMP			-.18E+00	-.41E-01	-.75E+00	3.08E-01 (0.611)
	R 3	-	-	F=3.58E-02 (0.035)	F=1.44E+01 (1.000)	0.32 F= 0.024 (0.006)	0.30 F= 0.022 (0.005)	6.64E-02	1.51E-02	2.91E-01	3.19E-01 (0.624)
	R 4	NON	NON	F=2.90E-02 (0.001)	F=4.14E+00 (0.997)	0.31 F= 0.025 (0.000)	0.07 F= 0.006 (0.000)	3.44E-02	7.68E-03	1.54E-01	2.50E-01 (0.598)
QG-LG2											
	R 1	-	-	F=6.59E+01 (1.000)	F=4.20E-02 (0.041)	2.06 F= 0.154 (0.075)	0.40 F= 0.030 (0.008)	-.72E-01	-.44E+00	-.12E-01	3.46E-01 (0.634)
	R 2	IMP	IMP	IMP	IMP			2.60E-01	2.06E+00	3.27E-02	4.60E-01 (0.662)
	R 3	-	-	F=1.42E+02 (1.000)	F=1.39E+00 (0.731)	0.66 F= 0.049 (0.015)	11.30 F= 0.935 (0.443)	1.07E-01	6.56E-01	1.75E-02	5.16E-01 (0.694)
	R 4	NON	NON	F=2.62E+01 (1.000)	F=5.14E-01 (0.234)	0.67 F= 0.055 (0.002)	4.99 F= 0.429 (0.143)	4.34E-02	2.71E-01	6.93E-03	3.16E-01 (0.623)

QG-SF2											
	R 1	-	-	F=6.81E+01 (1.000)	F=5.17E-01 (0.391)	15.55 F= 1.350 (0.717)	4.82 F= 0.372 (0.223)	1.76E-01	7.06E-01	4.41E-02	8.55E-01 (0.799)
	R 2	IMP	IMP	IMP	IMP			-.37E+00	-.18E+01	-.76E-01	6.70E-01 (0.725)
	R 3	-	-	F=2.89E+01 (1.000)	F=1.20E-01 (0.113)	7.56 F= 0.600 (0.374)	1.21 F= 0.090 (0.036)	1.23E-01	4.66E-01	3.25E-02	5.93E-01 (0.721)
	R 4	NON	NON	F=2.42E+01 (1.000)	F=2.75E+00 (0.972)	4.87 F= 0.419 (0.136)	21.98 F= 2.300 (0.951)	1.02E-01	4.02E-01	2.57E-02	7.42E-01 (0.769)
QG-SG2											
	R 1	-	-	F=1.89E+00 (0.827)	F=3.77E+02 (1.000)	14.87 F= 1.281 (0.695)	4.30 F= 0.329 (0.194)	2.14E-01	3.81E-02	1.20E+00	1.04E+00 (0.846)
	R 2	IMP	IMP	IMP	IMP			-.29E+00	-.64E-01	-.13E+01	5.22E-01 (0.681)
	R 3	-	-	F=8.03E-01 (0.464)	F=9.67E+02 (1.000)	7.06 F= 0.557 (0.348)	7.39 F= 0.585 (0.365)	3.12E-01	5.51E-02	1.77E+00	1.55E+00 (0.933)
	R 4	NON	NON	F=4.28E+00 (0.997)	F=4.10E+02 (1.000)	30.59 F= 3.600 (0.995)	3.98 F= 0.338 (0.087)	2.17E-01	3.92E-02	1.20E+00	1.60E+00 (0.943)
QG-PHE2											
	R 1	-	NON	F=3.17E-01 (0.264)	F=8.35E+00 (0.998)	2.81 F= 0.212 (0.113)	3.28 F= 0.249 (0.138)	-.24E-01	-.38E-02	-.16E+00	1.17E-01 (0.546)
	R 2	IMP	IMP	IMP	IMP			3.21E-01	5.34E-02	1.93E+00	5.77E-01 (0.698)
	R 3	-	-	F=4.54E-01 (0.354)	F=5.95E-01 (0.435)			-.70E-02	-.12E-02	-.42E-01	3.38E-02 (0.513)
	R 4	NON	NON	F=1.66E-03 (0.000)	F=5.11E+00 (0.999)	0.02 F= 0.001 (0.000)	0.67 F= 0.055 (0.002)	1.96E-02	3.17E-03	1.21E-01	1.43E-01 (0.556)
QG-PHK2											
	R 1	-	-	F=3.88E+01 (1.000)	F=1.10E-01 (0.104)	10.54 F= 0.864 (0.477)	1.11 F= 0.083 (0.032)	-.13E+00	-.53E+00	-.33E-01	6.33E-01 (0.734)
	R 2	IMP	IMP	IMP	IMP			-.48E+00	-.25E+01	-.90E-01	8.95E-01 (0.782)
	R 3	-	-	F=2.47E+01 (1.000)	F=2.86E-01 (0.242)	1.40 F= 0.104 (0.044)	2.68 F= 0.202 (0.106)	1.22E-01	4.65E-01	3.21E-02	5.89E-01 (0.719)
	R 4	NON	NON	F=2.69E+00 (0.969)	F=4.67E-02 (0.003)	2.81 F= 0.236 (0.038)	0.49 F= 0.041 (0.001)	-.32E-01	-.13E+00	-.79E-02	2.31E-01 (0.591)

Q6-S2											
	R 1	-	-	F=1.06E-01 (0.101)	F=6.50E-02 (0.063)			-.19E-02	-.36E-03	-.10E-01	9.22E-03 (0.504)
	R 2	IMP	IMP	IMP	IMP			-.28E+00	-.64E-01	-.12E+01	4.92E-01 (0.672)
	R 3	-	-	F=9.08E-02 (0.087)	F=6.98E+00 (0.995)	0.83 F= 0.062 (0.021)	0.02 F= 0.001 (0.000)	2.92E-02	5.40E-03	1.58E-01	1.40E-01 (0.555)
	R 4	NON	NON	F=7.72E-02 (0.006)	F=7.46E-01 (0.405)			-.11E-01	-.20E-02	-.56E-01	7.74E-02 (0.531)
Q6-CA/M62											
	R 1	-	NON	F=5.69E-01 (0.421)	F=1.29E+03 (1.000)	5.14 F= 0.398 (0.241)	66.22 F= 14.374 (1.000)	2.46E-01	4.44E-02	1.36E+00	1.21E+00 (0.880)
	R 2	IMP	IMP	IMP	IMP			4.31E-01	8.47E-02	2.19E+00	7.98E-01 (0.759)
	R 3	-	-	F=2.20E-01 (0.194)	F=1.57E+02 (1.000)	2.07 F= 0.155 (0.075)	5.94 F= 0.463 (0.286)	1.49E-01	2.88E-02	7.74E-01	7.22E-01 (0.761)
	R 4	NON	NON	F=4.90E-01 (0.216)	F=1.14E+03 (1.000)	5.08 F= 0.437 (0.149)	69.18 F= 18.333 (1.000)	2.20E-01	4.13E-02	1.17E+00	1.63E+00 (0.945)
Q6-RAP2											
	R 1	-	-	F=7.16E-01 (0.496)	F=3.76E-01 (0.304)			1.48E-02	1.94E-02	1.13E-02	7.10E-02 (0.528)
	R 2	IMP	IMP	IMP	IMP			5.03E-01	7.11E-01	3.56E-01	9.58E-01 (0.796)
	R 3	-	-	F=1.25E+00 (0.693)	F=1.53E-01 (0.141)			1.64E-01	2.13E-01	1.27E-01	7.96E-01 (0.783)
	R 4	NON	NON	F=2.82E+00 (0.975)	F=5.17E-02 (0.003)	23.56 F= 2.517 (0.967)	2.06 F= 0.172 (0.018)	1.35E-01	1.78E-01	1.03E-01	9.92E-01 (0.837)
Q6-CA2											
	R 1	-	NON	F=2.82E-01 (0.239)	F=9.54E+00 (0.999)	2.49 F= 0.187 (0.096)	0.19 F= 0.014 (0.003)	3.99E-02	7.55E-03	2.11E-01	1.91E-01 (0.575)
	R 2	IMP	IMP	IMP	IMP			2.24E-01	4.72E-02	1.07E+00	3.95E-01 (0.640)
	R 3	-	-	F=2.60E-02 (0.025)	F=7.08E+00 (0.996)	0.25 F= 0.018 (0.004)	0.16 F= 0.012 (0.002)	-.38E-01	-.79E-02	-.18E+00	1.83E-01 (0.572)
	R 4	NON	NON	F=9.74E-03 (0.000)	F=2.88E+00 (0.977)	0.10 F= 0.009 (0.000)	0.06 F= 0.005 (0.000)	2.28E-02	4.55E-03	1.14E-01	1.66E-01 (0.566)

QG-MG2											
	R 1	-	NON	F=6.89E-01 (0.483)	F=1.92E-01 (0.173)			-.24E+00	-.34E+00	-.18E+00	1.20E+00 (0.879)
	R 2	IMP	IMP	IMP	IMP			9.49E-01	1.41E+00	6.39E-01	3.16E+00 (0.975)
	R 3	-	-	F=1.42E-01 (0.131)	F=1.65E-01 (0.151)			-.13E+00	-.18E+00	-.97E-01	6.31E-01 (0.733)
	R 4	NON	NON	F=6.66E-02 (0.005)	F=5.41E-02 (0.003)			-.70E-01	-.97E-01	-.51E-01	5.14E-01 (0.695)
QG-K2											
	R 1	-	NON	F=7.38E-01 (0.494)	F=1.29E+01 (1.000)	6.30 F= 0.493 (0.306)	19.07 F= 1.728 (0.810)	-.48E-01	-.10E-01	-.22E+00	2.29E-01 (0.590)
	R 2	IMP	IMP	IMP	IMP			-.30E+00	-.88E-01	-.10E+01	5.38E-01 (0.686)
	R 3	-	-	F=6.80E-02 (0.066)	F=2.55E+01 (1.000)	0.65 F= 0.048 (0.015)	0.56 F= 0.041 (0.012)	7.45E-02	1.54E-02	3.60E-01	3.58E-01 (0.638)
	R 4	NON	NON	F=1.40E-01 (0.020)	F=1.45E-01 (0.021)			-.67E-02	-.15E-02	-.31E-01	4.91E-02 (0.520)
QG-NA2											
	R 1	-	-	F=6.79E-02 (0.066)	F=1.64E-01 (0.149)			-.47E-01	-.54E-01	-.41E-01	2.26E-01 (0.588)
	R 2	IMP	IMP	IMP	IMP			4.79E-01	5.92E-01	3.88E-01	9.04E-01 (0.784)
	R 3	-	-	F=5.47E-03 (0.005)	F=5.03E-02 (0.049)			-.21E-01	-.24E-01	-.19E-01	1.02E-01 (0.540)
	R 4	NON	NON	F=7.44E-02 (0.006)	F=6.07E-02 (0.004)			1.81E-02	2.09E-02	1.57E-02	1.32E-01 (0.552)
QG-T2											
	R 1	-	-	F=2.11E+00 (0.856)	F=2.10E-01 (0.186)			-.23E+00	-.39E+00	-.13E+00	1.11E+00 (0.862)
	R 2	IMP	IMP	IMP	IMP			1.55E-01	2.62E-01	9.14E-02	2.70E-01 (0.598)
	R 3	-	-	F=2.03E-01 (0.181)	F=2.03E-01 (0.181)			-.61E-01	-.98E-01	-.38E-01	2.92E-01 (0.614)
	R 4	NON	NON	F=2.16E-01 (0.047)	F=1.84E-01 (0.035)			-.11E+00	-.18E+00	-.64E-01	7.74E-01 (0.779)

QG-S/T2											
	R 1	-	-	F=2.96E-01 (0.249)	F=1.01E+01 (0.999)	2.60 F= 0.196 (0.102)	0.98 F= 0.073 (0.027)	7.70E-02	2.00E-02	2.97E-01	3.70E-01 (0.643)
	R 2	IMP	IMP	IMP	IMP			-.17E+00	-.68E-01	-.44E+00	3.02E-01 (0.609)
	R 3	-	-	F=1.17E-02 (0.011)	F=1.26E+00 (0.696)			2.48E-02	6.00E-03	1.02E-01	1.19E-01 (0.547)
	R 4	NON	NON	F=1.83E-02 (0.001)	F=1.97E+00 (0.901)			3.25E-02	8.39E-03	1.26E-01	2.36E-01 (0.593)
QG-PT2											
	R 1	-	-	F=2.76E-01 (0.235)	F=2.63E-01 (0.226)			-.50E-01	-.71E-01	-.35E-01	2.40E-01 (0.594)
	R 2	IMP	IMP	IMP	IMP			4.79E-01	5.98E-01	3.83E-01	9.02E-01 (0.783)
	R 3	-	-	F=1.17E+00 (0.671)	F=3.18E-01 (0.265)			3.08E-01	4.37E-01	2.18E-01	1.53E+00 (0.930)
	R 4	NON	NON	F=5.31E-01 (0.246)	F=3.90E-01 (0.146)			1.81E-01	2.53E-01	1.30E-01	1.33E+00 (0.906)
QG-PAO2											
	R 1	-	NON	F=7.49E-01 (0.488)	F=2.26E+01 (1.000)	6.43 F= 0.504 (0.313)	0.49 F= 0.036 (0.010)	6.58E-02	1.28E-02	3.38E-01	3.16E-01 (0.623)
	R 2	IMP	IMP	IMP	IMP			2.45E-01	5.28E-02	1.14E+00	4.33E-01 (0.653)
	R 3	-	-	F=1.01E-01 (0.096)	F=1.35E+01 (1.000)	0.94 F= 0.070 (0.025)	0.28 F= 0.021 (0.005)	-.56E-01	-.12E-01	-.26E+00	2.69E-01 (0.605)
	R 4	NON	NON	F=4.56E-03 (0.000)	F=3.88E+00 (0.995)	0.05 F= 0.004 (0.000)	0.21 F= 0.017 (0.000)	2.81E-02	5.76E-03	1.37E-01	2.04E-01 (0.581)
QG-AO-20											
	R 1	-	NON	F=2.14E+00 (0.860)	F=3.48E+00 (0.952)	21.19 F= 1.972 (0.853)	25.40 F= 2.497 (0.915)	1.18E-01	1.59E-01	8.75E-02	5.67E-01 (0.712)
	R 2	IMP	IMP	IMP	IMP			3.38E-01	5.30E-01	2.16E-01	6.10E-01 (0.708)
	R 3	-	-	F=3.75E-02 (0.036)	F=5.95E-01 (0.435)			-.35E-01	-.47E-01	-.26E-01	1.67E-01 (0.566)
	R 4	NON	NON	F=2.50E-02 (0.001)	F=2.79E-02 (0.001)			6.42E-02	8.73E-02	4.71E-02	4.68E-01 (0.679)

Q6-LF0-20											
	R 1	-	NON	F=3.00E+01 (1.000)	F=1.89E+04 (1.000)	74.49 F= 21.416 (1.000)	68.41 F= 15.881 (1.000)	9.69E-01	1.80E-01	5.22E+00	9.96E+00 (1.000)
	R 2	IMP	IMP	IMP	IMP			9.83E-01	1.96E-01	4.94E+00	4.15E+00 (0.987)
	R 3	-	-	F=3.46E+01 (1.000)	F=1.40E+04 (1.000)	77.10 F= 24.693 (1.000)	68.35 F= 15.837 (1.000)	8.64E-01	1.70E-01	4.39E+00	6.28E+00 (1.000)
	R 4	NON	NON	F=1.01E+02 (1.000)	F=3.95E+04 (1.000)	91.68 F= 90.030 (1.000)	86.29 F= 51.413 (1.000)	9.21E-01	1.77E-01	4.80E+00	1.16E+01 (1.000)
Q6-LG0-20											
	R 1	-	NON	F=1.25E-01 (0.117)	F=4.85E-02 (0.047)			2.50E-02	2.53E-02	2.48E-02	1.20E-01 (0.547)
	R 2	IMP	IMP	IMP	IMP			1.90E-01	2.10E-01	1.72E-01	3.33E-01 (0.620)
	R 3	-	-	F=4.52E-01 (0.353)	F=1.69E-02 (0.016)			-.39E-01	-.43E-01	-.36E-01	1.88E-01 (0.574)
	R 4	NON	NON	F=1.10E-02 (0.000)	F=1.78E-05 (0.000)			1.23E-02	1.30E-02	1.16E-02	8.94E-02 (0.535)
Q6-SF0-20											
	R 1	-	NON	F=3.89E-01 (0.313)	F=2.36E+02 (1.000)	3.55 F= 0.270 (0.152)	2.69 F= 0.203 (0.107)	-.16E+00	-.27E-01	-.94E+00	7.73E-01 (0.776)
	R 2	IMP	IMP	IMP	IMP			3.80E-01	7.13E-02	2.03E+00	6.93E-01 (0.731)
	R 3	-	-	F=4.85E-01 (0.373)	F=2.38E+02 (1.000)	4.44 F= 0.340 (0.202)	3.83 F= 0.292 (0.168)	1.76E-01	3.30E-02	9.44E-01	8.55E-01 (0.799)
	R 4	NON	NON	F=2.18E-04 (0.000)	F=2.11E+01 (1.000)	0.00 F= 0.000 (0.000)	1.18 F= 0.097 (0.005)	4.98E-02	8.95E-03	2.77E-01	3.63E-01 (0.641)
Q6-SG0-20											
	R 1	-	NON	F=4.55E-01 (0.354)	F=1.79E-01 (0.162)			-.69E-01	-.63E-01	-.76E-01	3.32E-01 (0.628)
	R 2	IMP	IMP	IMP	IMP			4.92E-01	5.39E-01	4.49E-01	9.33E-01 (0.790)
	R 3	-	-	F=3.12E-02 (0.030)	F=3.20E-02 (0.031)			-.12E+00	-.11E+00	-.13E+00	5.73E-01 (0.714)
	R 4	NON	NON	F=1.68E-01 (0.029)	F=2.94E-03 (0.000)			-.41E-01	-.39E-01	-.44E-01	2.99E-01 (0.617)

Q6-MOO-20											
	R 1	-	NON	F=2.40E-01 (0.209)	F=3.88E-02 (0.038)			-.15E-02	-.34E-03	-.68E-02	7.33E-03 (0.503)
	R 2	IMP	IMP	IMP	IMP			2.55E-01	6.06E-02	1.07E+00	4.52E-01 (0.659)
	R 3	-	-	F=1.24E-01 (0.117)	F=4.22E-01 (0.334)			-.11E-01	-.27E-02	-.48E-01	5.51E-02 (0.522)
	R 4	NON	NON	F=1.20E-02 (0.000)	F=1.20E+00 (0.679)			2.07E-02	4.80E-03	8.92E-02	1.51E-01 (0.560)
Q6-PH-H2O											
	R 1	-	NON	F=6.22E-03 (0.006)	F=1.99E-02 (0.019)			-.17E+00	-.20E+00	-.15E+00	8.28E-01 (0.792)
	R 2	IMP	IMP	IMP	IMP			9.56E-01	1.21E+00	7.55E-01	3.30E+00 (0.977)
	R 3	-	-	F=8.38E-02 (0.081)	F=5.49E-02 (0.053)			-.20E+00	-.25E+00	-.17E+00	9.89E-01 (0.833)
	R 4	NON	NON	F=2.10E-02 (0.001)	F=6.02E-03 (0.000)			-.72E-01	-.86E-01	-.60E-01	5.24E-01 (0.699)
Q6-PH-KCL											
	R 1	-	NON	F=6.13E-01 (0.445)	F=3.82E+00 (0.963)	5.29 F= 0.410 (0.249)	0.08 F= 0.006 (0.001)	-.21E-01	-.37E-02	-.12E+00	1.01E-01 (0.540)
	R 2	IMP	IMP	IMP	IMP			4.16E-01	7.89E-02	2.19E+00	7.66E-01 (0.750)
	R 3	-	-	F=4.68E-02 (0.046)	F=1.02E+01 (0.999)	0.44 F= 0.032 (0.008)	0.04 F= 0.003 (0.000)	-.37E-01	-.68E-02	-.20E+00	1.75E-01 (0.569)
	R 4	NON	NON	F=8.60E-02 (0.008)	F=2.17E+00 (0.928)			1.65E-02	3.01E-03	9.09E-02	1.20E-01 (0.548)
Q6-CO-20											
	R 1	-	NON	F=3.35E-01 (0.277)	F=2.02E-01 (0.180)			3.35E-02	3.63E-02	3.09E-02	1.61E-01 (0.563)
	R 2	IMP	IMP	IMP	IMP			2.19E-01	2.91E-01	1.64E-01	3.85E-01 (0.637)
	R 3	-	-	F=6.12E-03 (0.006)	F=3.92E-02 (0.038)			-.29E-01	-.32E-01	-.27E-01	1.41E-01 (0.555)
	R 4	NON	NON	F=9.22E-03 (0.000)	F=1.54E-03 (0.000)			1.92E-02	2.12E-02	1.75E-02	1.40E-01 (0.555)

QG-NO-20											
	R 1	-	NON	F=3.43E-01 (0.282)	F=1.75E+02 (1.000)	3.25 F= 0.246 (0.136)	2.75 F= 0.208 (0.110)	-.19E+00	-.37E-01	-.94E+00	9.02E-01 (0.812)
	R 2	IMP	IMP	IMP	IMP			9.81E-01	2.07E-01	4.63E+00	4.01E+00 (0.986)
	R 3	-	-	F=6.44E-01 (0.461)	F=1.59E+02 (1.000)	5.85 F= 0.455 (0.280)	2.98 F= 0.225 (0.122)	-.18E+00	-.38E-01	-.88E+00	8.91E-01 (0.809)
	R 4	NON	NON	F=8.13E-02 (0.007)	F=2.00E+01 (1.000)	0.86 F= 0.071 (0.003)	0.66 F= 0.055 (0.002)	-.64E-01	-.13E-01	-.31E+00	4.65E-01 (0.678)
QG-C/NO-20											
	R 1	-	-	F=3.11E+00 (0.937)	F=1.46E-01 (0.135)			1.62E-02	1.01E-01	2.59E-03	7.75E-02 (0.531)
	R 2	IMP	IMP	IMP	IMP			6.18E-01	4.56E+00	8.38E-02	1.25E+00 (0.850)
	R 3	-	-	F=1.87E+01 (1.000)	F=5.06E-01 (0.385)	0.09 F= 0.007 (0.001)	4.41 F= 0.338 (0.200)	-.37E-01	-.23E+00	-.58E-02	1.77E-01 (0.569)
	R 4	NON	NON	F=3.12E+01 (1.000)	F=2.15E-01 (0.047)	0.94 F= 0.077 (0.003)	2.16 F= 0.180 (0.020)	4.64E-02	2.96E-01	7.28E-03	3.38E-01 (0.632)
QG-PAO											
	R 1	-	NON	F=1.42E-01 (0.131)	F=1.33E+00 (0.714)			1.22E-02	2.18E-03	6.78E-02	5.83E-02 (0.523)
	R 2	IMP	IMP	IMP	IMP			3.86E-01	7.57E-02	1.96E+00	7.05E-01 (0.734)
	R 3	-	-	F=4.33E-02 (0.042)	F=6.79E+01 (1.000)	0.42 F= 0.031 (0.008)	1.03 F= 0.077 (0.029)	-.10E+00	-.20E-01	-.53E+00	5.00E-01 (0.689)
	R 4	NON	NON	F=2.04E-02 (0.001)	F=7.12E-02 (0.006)			-.28E-02	-.52E-03	-.15E-01	2.01E-02 (0.508)
QG-PT											
	R 1	-	-	F=1.09E+02 (1.000)	F=1.39E+00 (0.729)	16.99 F= 1.501 (0.759)	11.98 F= 0.998 (0.414)	2.41E-01	9.06E-01	6.41E-02	1.18E+00 (0.875)
	R 2	IMP	IMP	IMP	IMP			5.37E-01	2.61E+00	1.11E-01	1.04E+00 (0.813)
	R 3	-	-	F=1.55E+02 (1.000)	F=9.10E-01 (0.420)	4.36 F= 0.335 (0.198)	8.63 F= 0.693 (0.431)	3.02E-01	1.13E+00	8.08E-02	1.49E+00 (0.925)
	R 4	NON	NON	F=2.48E+02 (1.000)	F=7.55E-01 (0.411)	38.17 F= 5.041 (0.999)	7.90 F= 0.700 (0.347)	2.95E-01	1.13E+00	7.70E-02	2.21E+00 (0.984)

QG-CAO-20											
	R 1	-	-	F=1.02E-01 (0.097)	F=6.74E+00 (0.995)	0.93	0.24	2.75E-02	4.91E-03	1.54E-01	1.32E-01 (0.552)
	R 2	IMP	IMP	IMP	IMP			2.05E-01	4.74E-02	8.85E-01	3.60E-01 (0.629)
	R 3	-	-	F=1.21E-01 (0.114)	F=2.08E+02 (1.000)	1.13	0.50	-.15E+00	-.25E-01	-.83E+00	7.01E-01 (0.755)
	R 4	NON	NON	F=2.97E-01 (0.088)	F=1.55E+01 (1.000)	2.95	0.19	-.43E-01	-.77E-02	-.24E+00	3.12E-01 (0.622)
QG-MGO-20											
	R 1	-	-	F=8.69E+01 (1.000)	F=1.95E-01 (0.175)	15.06	1.90	1.92E-01	7.78E-01	4.73E-02	9.31E-01 (0.819)
	R 2	IMP	IMP	IMP	IMP			3.92E-01	1.64E+00	9.35E-02	7.17E-01 (0.737)
	R 3	-	-	F=4.09E+00 (0.970)	F=2.73E-01 (0.233)	9.89	2.42	-.35E-01	-.14E+00	-.87E-02	1.68E-01 (0.566)
	R 4	NON	NON	F=3.30E+01 (1.000)	F=3.71E-01 (0.134)	23.39	3.79	1.04E-01	4.19E-01	2.56E-02	7.56E-01 (0.774)
QG-KO-20											
	R 1	-	NON	F=1.17E+00 (0.671)	F=3.62E+02 (1.000)	9.75	2.35	1.79E-01	2.91E-02	1.10E+00	8.66E-01 (0.802)
	R 2	IMP	IMP	IMP	IMP			3.81E-01	6.62E-02	2.19E+00	6.95E-01 (0.731)
	R 3	-	-	F=6.46E-01 (0.462)	F=1.09E+03 (1.000)	5.81	7.80	-.32E+00	-.56E-01	-.18E+01	1.58E+00 (0.936)
	R 4	NON	NON	F=1.28E-01 (0.017)	F=9.74E+00 (1.000)	1.28	0.06	-.30E-01	-.51E-02	-.18E+00	2.18E-01 (0.586)
QG-NAO-20											
	R 1	-	-	F=4.08E+00 (0.970)	F=1.98E+00 (0.840)	2.45	15.27	3.23E-02	1.49E-01	6.98E-03	1.55E-01 (0.561)
	R 2	IMP	IMP	IMP	IMP			9.46E-01	5.30E+00	1.69E-01	3.11E+00 (0.974)
	R 3	-	-	F=7.38E+02 (1.000)	F=8.33E+00 (0.998)	19.22	44.77	-.48E+00	-.20E+01	-.11E+00	2.48E+00 (0.990)
	R 4	NON	NON	F=7.43E+01 (1.000)	F=2.81E-01 (0.079)	2.40	2.98	-.15E+00	-.66E+00	-.32E-01	1.07E+00 (0.855)

QG-SBE												
	R 1	-	NON	F=3.99E-01 (0.320)	F=4.08E+02 (1.000)	3.78 F= 0.288 (0.165)	4.47 F= 0.343 (0.204)	-.25E+00	-.47E-01	-.13E+01	1.22E+00 (0.883)
	R 2	IMP	IMP	IMP	IMP			9.79E-01	2.26E-01	4.25E+00	3.96E+00 (0.986)
	R 3	-	-	F=2.18E-01 (0.192)	F=3.00E+02 (1.000)	2.07 F= 0.155 (0.075)	4.77 F= 0.367 (0.220)	-.20E+00	-.37E-01	-.11E+01	9.65E-01 (0.828)
	R 4	NON	NON	F=2.23E-01 (0.050)	F=9.15E+01 (1.000)	2.33 F= 0.194 (0.024)	1.30 F= 0.107 (0.006)	-.12E+00	-.22E-01	-.61E+00	8.46E-01 (0.799)
QG-TO-20											
	R 1	-	-	F=4.48E+01 (1.000)	F=1.85E-01 (0.167)	8.37 F= 0.670 (0.417)	1.79 F= 0.134 (0.062)	-.12E+00	-.53E+00	-.29E-01	5.96E-01 (0.721)
	R 2	IMP	IMP	IMP	IMP			4.71E-01	2.19E+00	1.01E-01	8.87E-01 (0.780)
	R 3	-	-	F=1.12E+01 (0.999)	F=6.01E-02 (0.058)	1.01 F= 0.075 (0.028)	0.58 F= 0.043 (0.013)	-.64E-01	-.28E+00	-.15E-01	3.08E-01 (0.620)
	R 4	NON	NON	F=3.91E+00 (0.995)	F=3.01E-01 (0.090)	0.28 F= 0.023 (0.000)	2.98 F= 0.251 (0.044)	-.35E-01	-.15E+00	-.81E-02	2.58E-01 (0.601)
QG-S/TO-20											
	R 1	-	NON	F=1.23E-01 (0.115)	F=6.25E-01 (0.451)			-.75E-02	-.12E-02	-.45E-01	3.59E-02 (0.514)
	R 2	IMP	IMP	IMP	IMP			2.99E-01	5.43E-02	1.65E+00	5.35E-01 (0.685)
	R 3	-	-	F=3.26E-01 (0.271)	F=8.72E+00 (0.998)	2.91 F= 0.219 (0.118)	0.34 F= 0.025 (0.006)	-.33E-01	-.60E-02	-.18E+00	1.57E-01 (0.562)
	R 4	NON	NON	F=3.16E-03 (0.000)	F=1.57E+00 (0.814)			1.28E-02	2.25E-03	7.31E-02	9.34E-02 (0.537)
QG-HPFPO-20											
	R 1	-	-	F=5.94E-01 (0.435)	F=1.13E+02 (1.000)	5.64 F= 0.438 (0.269)	3.15 F= 0.238 (0.131)	-.22E+00	-.54E-01	-.91E+00	1.08E+00 (0.855)
	R 2	IMP	IMP	IMP	IMP			9.46E-01	3.36E-01	2.67E+00	3.11E+00 (0.974)
	R 3	-	-	F=1.65E-01 (0.151)	F=6.41E+01 (1.000)	1.66 F= 0.124 (0.056)	3.57 F= 0.271 (0.154)	-.15E+00	-.35E-01	-.65E+00	7.30E-01 (0.764)
	R 4	NON	NON	F=1.75E-01 (0.031)	F=2.28E+01 (1.000)	1.88 F= 0.156 (0.015)	1.57 F= 0.131 (0.010)	-.99E-01	-.24E-01	-.40E+00	7.22E-01 (0.763)

QG-HCCO-20											
	R 1	-	-	F=4.22E-01 (0.334)	F=3.74E-01 (0.303)			-.22E+00	-.30E+00	-.16E+00	1.06E+00 (0.850)
	R 2	IMP	IMP	IMP	IMP			-.11E+00	-.15E+00	-.77E-01	1.87E-01 (0.568)
	R 3	-	-	F=2.84E-01 (0.241)	F=1.81E-01 (0.163)			1.07E-01	1.48E-01	7.79E-02	5.17E-01 (0.695)
	R 4	NON	NON	F=7.49E-02 (0.006)	F=1.42E-01 (0.020)			-.51E-01	-.70E-01	-.37E-01	3.73E-01 (0.645)
QG-RUO-20											
	R 1	-	NON	F=6.63E-02 (0.064)	F=2.23E+01 (1.000)	0.61 F= 0.045 (0.013)	0.72 F= 0.053 (0.017)	7.52E-02	1.57E-02	3.60E-01	3.61E-01 (0.639)
	R 2	IMP	IMP	IMP	IMP			1.45E-01	3.34E-02	6.29E-01	2.53E-01 (0.592)
	R 3	-	-	F=9.87E-03 (0.009)	F=4.60E+00 (0.979)	0.10 F= 0.007 (0.001)	0.15 F= 0.011 (0.002)	-.38E-01	-.87E-02	-.17E+00	1.83E-01 (0.572)
	R 4	NON	NON	F=1.51E-02 (0.001)	F=3.36E+00 (0.989)	0.16 F= 0.013 (0.000)	0.13 F= 0.011 (0.000)	3.03E-02	6.65E-03	1.38E-01	2.21E-01 (0.587)
QG-CA/MGO-20											
	R 1	-	-	F=1.38E-01 (0.128)	F=2.82E-01 (0.240)			-.64E-01	-.10E+00	-.39E-01	3.05E-01 (0.619)
	R 2	IMP	IMP	IMP	IMP			-.26E+00	-.38E+00	-.18E+00	4.69E-01 (0.664)
	R 3	-	-	F=1.43E+00 (0.739)	F=1.19E-01 (0.112)			-.30E+00	-.45E+00	-.19E+00	1.46E+00 (0.921)
	R 4	NON	NON	F=8.57E-01 (0.482)	F=1.57E-01 (0.025)			-.20E+00	-.31E+00	-.13E+00	1.47E+00 (0.927)
QG-RAPO-20											
	R 1	-	NON	F=1.58E-02 (0.015)	F=5.37E-04 (0.001)			-.30E-01	-.26E-01	-.35E-01	1.46E-01 (0.557)
	R 2	IMP	IMP	IMP	IMP			-.11E+00	-.12E+00	-.11E+00	1.99E-01 (0.573)
	R 3	-	-	F=9.65E-02 (0.092)	F=4.59E-03 (0.004)			7.28E-02	6.67E-02	7.95E-02	3.50E-01 (0.635)
	R 4	NON	NON	F=2.67E-03 (0.000)	F=3.32E-02 (0.002)			1.02E-02	9.22E-03	1.13E-02	7.41E-02 (0.529)

QG-HPFP2											
	R 1	-	-	F=3.99E-01 (0.320)	F=1.13E+00 (0.660)			9.54E-01	9.98E-01	9.13E-01	9.02E+00 (1.000)
	R 2	IMP	IMP	IMP	IMP			-.86E+00	-.89E+00	-.83E+00	2.22E+00 (0.944)
	R 3	-	-	F=6.93E-01 (0.485)	F=8.60E-01 (0.440)			-.96E+00	-.10E+01	-.90E+00	9.44E+00 (1.000)
	R 4	NON	NON	F=1.97E-02 (0.001)	F=3.92E-02 (0.002)			-.15E+00	-.15E+00	-.14E+00	1.08E+00 (0.857)
QG-HCC2											
	R 1	-	NON	F=1.29E-01 (0.121)	F=7.30E+00 (0.996)	1.26 F= 0.093 (0.038)	41.07 F= 5.111 (0.992)	8.50E-02	7.86E-02	9.19E-02	4.08E-01 (0.657)
	R 2	IMP	IMP	IMP	IMP			-.35E+00	-.34E+00	-.36E+00	6.29E-01 (0.713)
	R 3	-	-	F=2.69E-01 (0.230)	F=4.57E-01 (0.356)			-.50E-01	-.51E-01	-.49E-01	2.40E-01 (0.594)
	R 4	NON	NON	F=1.25E-02 (0.001)	F=6.90E-05 (0.000)			-.23E-01	-.22E-01	-.23E-01	1.65E-01 (0.565)
QG-RU2											
	R 1	-	NON	F=1.28E+00 (0.701)	F=2.44E+02 (1.000)	10.57 F= 0.867 (0.476)	9.41 F= 0.762 (0.470)	2.03E-01	3.95E-02	1.05E+00	9.89E-01 (0.833)
	R 2	IMP	IMP	IMP	IMP			-.18E+00	-.37E-01	-.85E+00	3.11E-01 (0.612)
	R 3	-	-	F=6.40E-01 (0.459)	F=5.23E+02 (1.000)	5.91 F= 0.461 (0.284)	9.74 F= 0.792 (0.486)	-.31E+00	-.64E-01	-.15E+01	1.55E+00 (0.932)
	R 4	NON	NON	F=2.02E-01 (0.042)	F=3.15E+01 (1.000)	2.06 F= 0.172 (0.018)	2.46 F= 0.206 (0.028)	-.76E-01	-.15E-01	-.37E+00	5.51E-01 (0.708)

5 - NORMALITE DES RESIDUS D'AJUSTEMENT DES DONNEES ANALYSEES SELON LE MODELE DU CARRE LATIN

(pour la signification des sigles, cf l'annexe 1)

On conclue à la non-normalité d'un paramètre donné, lorsque l'on observe, au niveau des fréquences cumulées, (test de KOLMOGOROV et SMIRNOV).

$d_{0,05}$ = /FREQ.TH - FREQ.OBS/ $\geqslant$ 0,01447 pour l'une des 6 classes de rangement des résidus de l'analyse de variance effectuée selon le modèle de corrélation.

Apparaissent normaux sous cette condition, les paramètres suivants :

QG, PG, AO-20, LFO-20, LGO-20, SFO-20, SGO-20, MOO-20, PH-H2O, PH-KCI, CO-20, NO-20, C/NO-20, PAO, PT, CAO-20, MGO-20, KO-20, NAO-20, SBE, TO-20, STO-20, TCE-GR, P-GR, K-GR, QMG-GR, QN-GR, QP-GR.

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:QG
date :06/01/85
unite :g/m2

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	6	-49.273	-33.763	-0.820	0.167	0.206
2	11	-17.363	-8.588	-0.209	0.472	0.417
3	8	5.405	16.587	0.403	0.694	0.657
4	7	26.399	41.762	1.015	0.889	0.845
5	3	55.496	66.937	1.627	0.972	0.948
6	1	92.112	92.112	2.238	1.000	0.987

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:PG
date :06/01/85
unite :g/plt

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	6	-6.969	-4.745	-0.750	0.167	0.226
2	12	-2.705	-1.057	-0.167	0.500	0.434
3	9	1.044	2.630	0.416	0.750	0.661
4	4	3.655	6.318	0.999	0.861	0.841
5	4	9.142	10.006	1.582	0.972	0.943
6	1	13.693	13.693	2.165	1.000	0.985

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:A0-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-4.251	-3.638	-1.286	0.083	0.096
2	3	-3.090	-1.990	-0.703	0.167	0.241
3	9	-1.273	-0.343	-0.121	0.417	0.452
4	11	0.300	1.304	0.461	0.722	0.678
5	4	2.334	2.951	1.043	0.833	0.852
6	6	3.474	4.599	1.625	1.000	0.948

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:LF0-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	4	-1.533	-1.281	-1.250	0.111	0.103
2	4	-0.981	-0.706	-0.689	0.222	0.245
3	8	-0.316	-0.131	-0.127	0.444	0.449
4	7	0.152	0.444	0.434	0.639	0.668
5	9	0.700	1.019	0.995	0.889	0.840
6	4	1.305	1.594	1.557	1.000	0.940

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:LG0-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	10	-0.925	-0.624	-0.561	0.278	0.287
2	13	-0.258	0.179	0.161	0.639	0.564
3	9	0.578	0.982	0.883	0.889	0.811
4	3	1.337	1.785	1.605	0.972	0.946
5	0	0.000	2.587	2.327	0.972	0.990
6	1	3.390	3.390	3.049	1.000	0.999

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:SF0-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-3.658	-2.656	-1.958	0.028	-.008
2	1	-1.825	-1.653	-1.219	0.056	0.109
3	7	-1.001	-0.650	-0.479	0.250	0.316
4	14	-0.130	0.353	0.260	0.639	0.603
5	9	0.726	1.356	0.999	0.889	0.841
6	4	1.944	2.358	1.739	1.000	0.959

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:SGO-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-6.047	-4.061	-1.138	0.028	0.126
2	9	-3.126	-2.075	-0.582	0.278	0.280
3	10	-0.828	-0.089	-0.025	0.556	0.490
4	7	0.677	1.897	0.532	0.750	0.703
5	3	2.400	3.883	1.088	0.833	0.862
6	6	5.087	5.869	1.645	1.000	0.950

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:MOO-20
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	5	-0.339	-0.261	-1.041	0.139	0.148
2	4	-0.188	-0.110	-0.438	0.250	0.331
3	13	-0.030	0.042	0.166	0.611	0.566
4	9	0.125	0.193	0.770	0.861	0.779
5	2	0.250	0.344	1.373	0.917	0.915
6	3	0.407	0.496	1.977	1.000	0.976

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:PH-H2O
date :01/03/84
unite :-

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-0.108	-0.089	-1.173	0.083	0.118
2	6	-0.074	-0.047	-0.623	0.250	0.267
3	5	-0.029	-0.006	-0.073	0.389	0.471
4	12	0.012	0.036	0.476	0.722	0.683
5	5	0.054	0.078	1.026	0.861	0.848
6	5	0.099	0.119	1.576	1.000	0.942

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:PH-KCL
date :01/03/84
unite :-

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	2	-0.133	-0.097	-1.222	0.056	0.108
2	5	-0.061	-0.040	-0.506	0.194	0.306
3	18	-0.014	0.017	0.210	0.694	0.583
4	8	0.043	0.074	0.926	0.917	0.823
5	1	0.129	0.131	1.642	0.944	0.950
6	2	0.175	0.187	2.358	1.000	0.991

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:CO-20
date :01/03/84
unite :Pour mille

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	5	-1.966	-1.521	-1.048	0.139	0.146
2	6	-0.874	-0.619	-0.427	0.306	0.335
3	11	-0.139	0.282	0.194	0.611	0.577
4	9	0.731	1.183	0.815	0.861	0.793
5	3	1.650	2.085	1.436	0.944	0.925
6	2	2.536	2.986	2.057	1.000	0.980

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:NO-20
date :01/03/84
unite :Pour mille

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	4	-0.157	-0.128	-1.242	0.111	0.104
2	4	-0.102	-0.068	-0.658	0.222	0.255
3	8	-0.021	-0.007	-0.073	0.444	0.471
4	9	0.016	0.053	0.512	0.694	0.696
5	9	0.085	0.113	1.097	0.944	0.864

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:C/NO-20
date :01/03/84
unite :-

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	5	-0.625	-0.422	-0.872	0.139	0.191
2	11	-0.243	-0.114	-0.235	0.444	0.407
3	6	0.035	0.194	0.402	0.611	0.656
4	11	0.289	0.502	1.039	0.917	0.851
5	2	0.649	0.811	1.676	0.972	0.953
6	1	1.119	1.119	2.313	1.000	0.990

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:PAO
date :01/03/84
unite :ppm

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-5.389	-3.833	-0.934	0.083	0.174
2	16	-1.526	-0.250	-0.061	0.528	0.476
3	14	1.292	3.333	0.812	0.917	0.792
4	2	4.208	6.917	1.685	0.972	0.954
5	0	0.000	10.500	2.558	0.972	0.995
6	1	14.083	14.083	3.432	1.000	1.000

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:PT
date :01/03/84
unite :ppm

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	4	-51.528	-40.556	-0.987	0.111	0.161
2	9	-26.806	-13.750	-0.335	0.361	0.369
3	12	-0.764	13.056	0.318	0.694	0.625
4	6	27.361	39.861	0.970	0.861	0.834
5	3	43.194	66.667	1.622	0.944	0.948
6	2	81.389	93.472	2.274	1.000	0.989

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:CAO-20
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	7	-0.348	-0.253	-0.737	0.194	0.230
2	9	-0.158	-0.028	-0.081	0.444	0.468
3	13	0.067	0.197	0.575	0.806	0.717
4	5	0.272	0.422	1.231	0.944	0.891
5	0	0.000	0.647	1.886	0.944	0.970
6	2	0.814	0.872	2.542	1.000	0.994

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:MGO-20
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-6.579	-4.503	-1.530	0.028	0.055
2	4	-3.681	-2.426	-0.825	0.139	0.204
3	9	-1.251	-0.350	-0.119	0.389	0.453
4	14	0.535	1.726	0.567	0.778	0.721
5	7	2.742	3.803	1.292	0.972	0.902
6	1	5.879	5.879	1.998	1.000	0.977

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:KO-20
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	2	-0.065	-0.049	-1.087	0.056	0.137
2	10	-0.032	-0.018	-0.394	0.333	0.347
3	13	0.000	0.013	0.299	0.694	0.617
4	8	0.024	0.045	0.992	0.917	0.839
5	1	0.062	0.076	1.685	0.944	0.954
6	2	0.101	0.107	2.378	1.000	0.991

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:NA0-20
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-0.202	-0.126	-1.598	0.028	0.045
2	4	-0.077	-0.051	-0.641	0.139	0.261
3	20	-0.008	0.025	0.316	0.694	0.624
4	10	0.042	0.101	1.273	0.972	0.898
5	0	0.000	0.176	2.230	0.972	0.987
6	1	0.252	0.252	3.187	1.000	0.999

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:SBE
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-7.074	-4.767	-1.520	0.028	0.056
2	5	-3.549	-2.460	-0.785	0.167	0.216
3	12	-0.932	-0.153	-0.049	0.500	0.481
4	11	1.073	2.155	0.687	0.806	0.754
5	6	2.906	4.462	1.423	0.972	0.923
6	1	6.769	6.769	2.159	1.000	0.985

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:T0-20
date :01/03/84
unite :meq/100g

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	4	-3.594	-2.450	-0.899	0.111	0.184
2	11	-1.625	-0.618	-0.227	0.417	0.410
3	10	0.341	1.214	0.446	0.694	0.672
4	9	2.099	3.046	1.118	0.944	0.868
5	1	3.243	4.878	1.791	0.972	0.963
6	1	6.710	6.710	2.463	1.000	0.993

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:S/TO-20
date :01/03/84
unite :-

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	2	-0.105	-0.087	-1.752	0.056	0.022
2	0	0.000	-0.054	-1.083	0.056	0.138
3	8	-0.036	-0.021	-0.415	0.278	0.339
4	13	-0.002	0.013	0.254	0.639	0.600
5	9	0.029	0.046	0.922	0.889	0.822
6	4	0.067	0.079	1.591	1.000	0.944

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:TCE-GR
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-0.376	-0.291	-1.153	0.083	0.123
2	7	-0.181	-0.125	-0.497	0.278	0.310
3	11	-0.056	0.040	0.159	0.583	0.563
4	8	0.095	0.206	0.815	0.806	0.793
5	5	0.268	0.371	1.471	0.944	0.929
6	2	0.457	0.536	2.127	1.000	0.983

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:N-GR
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-0.162	-0.124	-2.720	0.028	-.266
2	0	0.000	-0.087	-1.903	0.028	0.000
3	1	-0.051	-0.050	-1.085	0.056	0.138
4	9	-0.026	-0.012	-0.267	0.306	0.395
5	19	0.009	0.025	0.550	0.833	0.709
6	6	0.047	0.062	1.368	1.000	0.914

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:P-GR
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	1	-0.027	-0.019	-1.655	0.028	0.036
2	4	-0.013	-0.011	-0.959	0.139	0.168
3	5	-0.006	-0.003	-0.264	0.278	0.396
4	18	0.001	0.005	0.432	0.778	0.667
5	4	0.007	0.013	1.127	0.889	0.870
6	4	0.018	0.021	1.823	1.000	0.966

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:K-GR
date :01/03/84
unite :%

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	2	-0.027	-0.021	-1.274	0.056	0.098
2	6	-0.016	-0.011	-0.654	0.222	0.256
3	10	-0.006	-0.001	-0.033	0.500	0.487
4	9	0.005	0.010	0.588	0.750	0.722
5	7	0.015	0.020	1.208	0.944	0.887
6	2	0.027	0.031	1.829	1.000	0.966

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:QMG-GR
date :01/01/85
unite :g/m2

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-0.106	-0.082	-1.212	0.083	0.110
2	5	-0.056	-0.038	-0.566	0.222	0.286
3	11	-0.019	0.005	0.081	0.528	0.532
4	11	0.029	0.049	0.727	0.833	0.766
5	4	0.063	0.093	1.373	0.944	0.915
6	2	0.120	0.137	2.019	1.000	0.978

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:QN-GR
date :01/01/85
unite :g/m2

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	3	-1.111	-0.883	-1.219	0.083	0.110
2	8	-0.467	-0.324	-0.446	0.306	0.328
3	13	-0.060	0.235	0.324	0.667	0.627
4	10	0.497	0.795	1.093	0.944	0.863
5	1	0.966	1.354	1.863	0.972	0.969
6	1	1.913	1.913	2.632	1.000	0.996

NORMALITE DES DISTRIBUTIONS
ACVHM-TAMOA 1984

variable:QP-GR
date :01/01/85
unite :g/m2

1-CLASSE,EFFECTIF,MOYENNE,FREQUENCES OBSERVEES ET THEORIQUES

CLASSE	EFFECTIF	MOYENNE	LIM.SUP.	VAR.RED.	FREQ.OBS	FREQ.TH
1	4	-0.195	-0.139	-0.987	0.111	0.161
2	9	-0.079	-0.052	-0.373	0.361	0.354
3	9	-0.027	0.034	0.241	0.611	0.595
4	9	0.087	0.120	0.855	0.861	0.804
5	4	0.163	0.206	1.469	0.972	0.929
6	1	0.293	0.293	2.083	1.000	0.981